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NERGY POLICY ACT AMENDMENTS OF 1997

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HEARING

BEFORE THE

UBCOMMITTEE ON ENERGY AND POWER

OF THE

COMMITTEE ON COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTH CONGRESS

SECOND SESSION

ON

H.R. 2568

JULY 21, 1998

Serial No. 105–109

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THE ENERGY POLICY ACT AMENDMENTS OF 1997

TUESDAY, JULY 21, 1998

HOUSE OF REPRESENTATIVES,
COMMITTEE ON COMMERCE,
SUBCOMMITTEE ON ENERGY AND POWER,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 2322, Rayburn House Office Building, Hon. Dan Schaefer (chairman) presiding.

Members present: Representatives Schaefer, Largent, Rogan, Shimkus, Hall, McCarthy, and Wynn.

Staff present: Joseph Kelliher, majority counsel; Donn Salvosa, legislative clerk; and Howard Bauleke, minority counsel.

Mr. SCHAEFER. The Energy and Power Subcommittee will come to order, and this morning we are going to be talking about H.R. 2568, the Energy Policy Act Amendments of 1997.

Now, this is legislation introduced by our colleague, Representative Shimkus of Illinois, and it would amend the Energy Policy Act of 1992 and the Energy Conservation and Policy Act of 1974 to designate biodiesel fuel as an alternative fuel and encourage the use of biodiesel as a motor fuel. The purpose of the Shimkus bill is to improve the energy security of the United States by reducing our reliance on imported oil.

Petroleum imports are used predominantly as a transportation fuel. The Energy Policy Act recognized that there was an urgent need to reduce our country's dependence on imported oil for motor fuels and promote the development of alternative fuels as a means of reducing petroleum.

The hearing really comes at an important time. Studies prepared by DOE indicate that the United States is making very poor progress toward meeting the replacement fuel goals in the Energy Policy Act. The act established a goal of replacing 10 percent of petroleum motor fuels in the year 2000 and replacing 30 percent of petroleum fuels in the year 2010. Unfortunately, it appears we will fall very well short of these goals.

In 1996, the U.S. replaced only 3.1 percent of its petroleum motor fuels. Importantly, most of the replacement, which was approximately 2.9 percent, occurred as a result of fuel changes required by the Clean Air Act. Only 0.2 percent of our petroleum consumption was replaced actually by alternative fuels. In short, the Clean Air Act may have done more to improve energy security than the alternative fuel programs established by the Energy Policy Act.

Since it appears clear we are not going to meet the replacement fuel targets in the Energy Policy Act, we must first ask whether or not those goals are still important, and I hope my colleagues and the witnesses will address that question today. If the goals are not important, DOE has authority under the Energy Policy Act to lower the target or roll back the dates. I believe the replacement fuel goals in the Energy Policy Act are important and shouldn't be abandoned, and I strongly believe that we should continue to strive to improve our energy security. That belief led me to oppose efforts to sell our oil reserves in the Strategic Petroleum Reserve, and the belief drives me to ask why are we falling short of the replacement fuel goals in the act. In my view, DOE's failure to meet these goals either reflects defects the Energy Policy Act, or is an administrative failure on the part of the agency.

Last year DOE recommended that DOE and interested committees of Congress begin discussions on how possible additional programs and the authorities would contribute to reaching or more meaningfully approaching the EPAct goals. That is why we are here today. It may be necessary to amend the Energy Policy Act to improve the ability of DOE to achieve the replacement fuel goals of the act. I have not made up my mind on this question, but it seems to me that there need to be some changes.

DOE acknowledges that reliance on fleet purchase requirements in the Energy Policy Act alone is unlikely to work. According to an analysis prepared by DOE last year, alternative fuel vehicle sales would have to grow to between 35 and 40 percent of the total light-duty vehicle sales by next year and stay at that level for the U.S. to meet the replacement fuel goals in the Energy Policy Act. That is not going to happen. For that reason, DOE needs to develop new approaches to replace petroleum motor fuels.

It may be necessary to develop a strategy that has many components, each of which will take a small step forward; and our colleague, John Shimkus, has brought forth an important piece of legislation that could well be one component in such a strategy. The Shimkus bill recognizes the importance of the replacement fuel goals in the Energy Policy Act and takes a critical step toward improving our energy security, and in general this bill would include biodiesel fuel in the definition of alternative fuels and promote an actual use of biodiesel fuel. And although DOE supports development of biodiesel fuel, the agency expresses concern about H.R. 2568.

DOE recommends the issue be dealt with through a rulemaking in response to a September 1996 petition filed by the National Biodiesel Board. In its testimony DOE acknowledges its response to the petition has taken quite some long time, and that much is irrefutable. I can't understand that. DOE promised to issue a proposed rule last spring when the Senate demonstrated interest in moving the companion to the Shimkus bill. The proposed rule was promised by May 1998, but that date came and went without a rule being issued, and it seems that the Senate has lost patience with DOE.

Last week the Senate approved a rider to the agricultural appropriation bill, attaching a companion to the Shimkus bill. The House is a more patient body, I might say, than the Senate; however, that patience is not without its limits, and I urge DOE to issue its proposed rule as soon as possible so that the subcommittee can weigh its proposal against the Shimkus bill and make a decision on how to proceed.

And I am looking forward to hearing the testimony of the witnesses today. I have another meeting going, and I am going to allow Mr. Shimkus to take the chair, but I would, first of all, turn to my good friend from Texas, Mr. Hall.

Mr. HALL. Mr. Chairman, I thank you. Inasmuch as you have covered it very well, I won't need to be detailed. But I do want to thank John Shimkus and Karen McCarthy for their good work on this and their hard work on this and their cooperative thrust on this, because it is very important, it is very important to me as a Member from a State that is one of the 10 energy States, and it is important to me as an effort to cause the rest of the country to look on energy as a national asset.

And that is one of the problems that we have in that railroads—I am not a big fan of railroads, although we have to have them during an emergency, to travel. Particularly during war times we travel by rail in this country basically, and Amtrak goes from here to New York about 35 times a day and from here to Philadelphia 38 times a day, and the damn thing doesn't even whistle in my district. It stops in Longview for, I think, about 30 minutes.

But I vote for railroads because railroads are a national asset, and that, I think, is our effort, and I think this is a good step in that direction.

Of course, as the chairman says, this amends alternative fuel fleet provisions of the 1992 Energy Policy Act to work toward a biodiesel fuel blend. And we go back to the 1992 act, know that it authorized, I think, several—more than several programs to reduce consumption of petroleum motor fuel by promoting the use of replacement fuels and alternative fuels. Even Synfuels Corporation, it seemed like—I think you told me Jimmy Carter set that up in the late 1970's, and that is one of the few good things that I thought Jimmy Carter did. And then the Congress, in its lack of wisdom, killed the Synfuels program, what, about 6 or 8 years ago?

I think it was a good program. It would have been a great aid to men and women of agriculture, and it would have been an effort toward relieving the energy crunch that we can get into almost any time.

I think last week the Senate added language to their companion version of H.R. 2568 to the ag appropriations bill. That—and I think in view, Mr. Chairman, of their attempt to authorize on an appropriations bill, I hope our committee will be appointed as conferees on that. I hope we have—certainly these two authors will be conferees on it and others of us who know how to represent this district ought to be conferees on it on the relevant section of that upcoming appropriations conference.

I think the Senate's action makes our hearing today probably even more timely, and I look forward to the testimony of the panel today, because I have a little problem technically with the thrust, but overall lack the thrust of more use of the blend that they put together here, and I am anxious to hear from people that obviously know more than we do about it. And I thank you for your time.

Mr. SCHAEFER. The Chair thanks the gentleman very much, and I know he is very knowledgeable in this whole area of alternative fuels and some ways that we can change the way—what we are doing. And he is a nice-looking guy, he said too.

Mr. HALL. I use everything I've got.

Mr. SCHAEFER. I would now call on Mr. Shimkus for an opening statement and ask him to take the chair, because I do have another meeting going, real quickly; and I will let him handle the next point.

Proceed, chairman.

Mr. SHIMKUS [presiding]. Good morning to the panel of witnesses and particularly to a constituent of mine and the current president of the American Soybean Association, Mr. Gay. I am very happy to have the opportunity to discuss the Energy Policy Act Amendments of 1997, H.R. 2568, which was introduced by Representative Karen McCarthy, to my far left, and me last September—not politically. Since then we have worked hard to line up cosponsors on this bill. As of today, the cosponsor list includes 74 Members of this House and, of those Members, 12 are from this very committee.

The companion bill in the Senate, Senate 1141, was introduced by Senators Tim Johnson and Larry Craig and has 19 bipartisan cosponsors. The Senate Energy and Natural Resources Committee has already had a hearing on this legislation on May 21 of this year. Additionally, this legislation was added unanimously to the Senate Ag Appropriations Act as an amendment last Thursday, July 16.

Representative McCarthy and I introduced legislation last year for several reasons. First, this bill will help reduce our national dependence on foreign oil, which was a goal of this statute when written. Currently, the program focuses heavily on dedicated vehicles which, while noble, is not economically practical or successful. In fact, in the department's own testimony we will hear that EPACT has only been able to displace 0.25 percent of the petroleum used today. The additional 0.29 percent displacement was due directly to mandates of the Clean Air Act. With the 10 percent displacement goal by 2000 growing closer every day, I think Congress must ask if the current policies and goals are attainable. I believe that Congress and the department need to engage this issue and work together to protect our economy from another oil crisis in the Middle East.

H.R. 2568 will help clean our environment, which the Department of Energy's own study concludes. In fact, the National Renewable Energy Laboratory maintains that using biodiesel will reduce emissions of hydrocarbons, particulates, carbon monoxide and sulfur dioxide. If there is no objection from the committee, I would like to submit this study for the record.

[The study entitled, An Overview of Biodiesel and Petroleum Diesel Life Cycles, A Joint Study Sponsored by: U.S. Department of Agriculture and U.S. Department of Energy, is retained in subcommittee files.]

Mr. SHIMKUS. While I am on the subject of the environment, I want to take a brief moment to mention that biodiesel is a perfect fuel for marine environments as well. In fact, since biodiesel is nontoxic, biodegradable and sulfur-free, our intercoastal waterways which—my district lies along the Illinois River and the Mississippi River—harbors and open seas will be safer should fuel spills occur.

Also in my district there are five ferry systems that transport constituents across to the peninsula of Calhoun County. Three of those five are run by the Illinois Department of Transportation, so they would fall under this act. To promote use of biodiesel in a sensitive marine environment, H.R. 2568 would allow boats that use biodiesel blends to count toward the mandated purchase requirements.

H.R. 2568 also helped develop and increase markets for the farmers of this Nation, which coincidentally keeps a promise Congress made to the agricultural community when it passed the Freedom to Farm Act. By allowing fleets to use this domestically produced, renewable fuel in their fleets, we will increase demand and, therefore, the prices of soybean, canola, rape seed and beef tallow.

I also believe this legislation in our hearing today is quite timely, as farmers nationwide are experiencing dramatic income losses due to the financial crisis in the Far East and also the weather in my part of the Nation. This legislation would also help fleet managers comply with the mandates of EPACT by providing flexibility to the law. Currently, fleet managers cannot use biodiesel blends in order to comply with EPACT and are forced to invest precious dollars in completely new infrastructure and personnel. In fact, we will hear today in testimony that biodiesel is a much more economical technology than those currently being used.

This legislation would increase competition in the alternative fuels market which, over the long term, will drive down prices to levels where mainstream consumers will use alternative fuels. I believe we need more competition in the alternative fuels market, not less; and neither the Congress nor the department should be involved in protecting dominant alternative fuels from competitors such as biodiesel.

Finally, I would like to tell you what is not in this legislation. There is no tax break for biodiesel. There is no Federal mandate that this fuel must be used, and there is no authorization for new spending. Plain and simple, this legislation only provides the biodiesel industry the opportunity to compete in fleet markets, a market which they have been frozen out of for 3 long years.

With that, I would like to yield back my time. I want to welcome again the committee and then turn to the—my cosponsor, the gentlewoman from the great State of Missouri, across the border from Illinois, Ms. McCarthy.

Ms. McCARTHY. Thank you very much, Mr. Chairman, and thank you for getting us this hearing today—I know with all the competing demands for attention that this subcommittee has, this was no small feat—and also for the informative overview that you gave with regard to this bill with your opening remarks.

I appreciated, too, those remarks by Mr. Schaefer and Mr. Hall. And, Mr. Hall, while there is an Amtrak train in Missouri and I helped to achieve that as a State legislator and support it wholeheartedly, my district is an urban area. Our agriculture is basically flower pots and window boxes, but I support this effort because I know how important it is to my community of Kansas City and its suburbs. We are trying very hard to achieve the EPA 2.5 particulate matter standards as well as to carry out the Energy Policy Act of 1992. And in my prior life as a State legislator in the Missouri house, who worked on environmental issues, I worked with my State department to try to implement the Energy Policy Act; and as a result, Missouri, while it has, like many other States, not achieved the goals set out in the act, we are working hard to convert our fleet and also to make it possible through natural gas, propane and solar to achieve the goals.

I think that this bill will help in that regard, and that is why I am a champion of it and proud to be a cosponsor with you. It is truly a bi-State and a bipartisan effort combining both urban and rural concerns, and I am particularly glad with the panel that we have here today, Mr. Chairman, because it is quite a distinguished panel.

I am looking forward very much to the remarks by Mr. Robert Sellers, who is the maintenance supervisor of my Kansas City Area Transit Authority, which serves the Fifth District in Missouri; and as a Representative of that district, I am really proud that the Kansas City Area Transportation Authority is doing a pilot program, a 10-month test demonstration, using beef-tallow-based biodiesel fuel in several diesel-powered transit coaches. I took part in that launch, observed firsthand the improvement of the burned fuel and know that it is important to our community as we seek to meet those EPA guidelines. We are using beef tallow as a by-product of the beef packing industry which is a leading enterprise in our region, although no longer one of the mainstream enterprises in Kansas City.

But I look very much forward to your remarks today, Mr. Sellers, about this very successful demonstration project.

The B20 biodiesel really, as everyone has mentioned, reduced emissions from motor vehicles, and while the testing that is reported in March 1998 by the United States EPA Protection Agency shows that the use of biodiesel fuel reduces particulate matter emissions by 30 percent and hydrocarbon emissions by 95 percent and carbon monoxide emissions by 50 percent when compared with normal diesel, I think that the real key to this—and it is clear from the study—is, it addresses the overall ozone smog-forming potential of exhaust emissions at one-half that of conventional diesel fuel.

We are talking about environmental issues, we are talking about economic issues, and we are talking about a way to implement a national law that is affordable and achievable with the technology that we have today. I am convinced that had this technology been on the table in 1992 when that law was enacted, it sincerely would have been a part of the listing of those fuels which could be considered; and while I very much support the law and all of the efforts that have been made to date with regard to implementing it, I know it hasn't been easy, because I worked on the State level on this issue. I think that we now, given the information that we have and knowing that we will not achieve the goals in the time allotted, must consider other alternatives to get there, alternatives that will help perhaps with the timetable.

Perhaps we need to address some revisions to this legislation to make it compatible with existing law, but I want to announce that to the panel and all of us who are working on this, Mr. Chairman, that I view this legislation as key. I am willing to work on it to make sure that it is conducive to the effort that is ongoing as a part of the department's guidelines, and I look forward to the panel's wisdom. I look forward to questioning them to pursue solutions in a bipartisan manner, because I do know that communities like mine must achieve those new standards. It is for the health and safety of the community and this Nation that we work together, Mr. Chairman, to achieve those goals.

Mr. SHIMKUS. I thank the gentlewoman from Missouri.

And I now turn to the gentleman from Oklahoma, Mr. Largent. Do you have an opening statement?

Okay. Then we will turn to our panelists, and first, we have Mr. Thomas Gross, Deputy Assistant Secretary for Transportation Technologies, U.S. Department of Energy. As always, your full statements will be accepted, and we are looking for a 5-minute brief synopsis; and then, once we get to the question-and-answer period, as I think standard for the Commerce Committee as a whole, a real open dialog and exchange. So when questions are answered, should someone else want to respond, you know just keep respectful, and then we can really have a clear airing.

So, Mr. Gross, please begin.

STATEMENT OF HON. THOMAS J. GROSS, DEPUTY ASSISTANT SECRETARY FOR TRANSPORTATION TECHNOLOGIES, U.S. DEPARTMENT OF ENERGY

Mr. GROSS. Good morning, Mr. Chairman, members of the subcommittee. I am pleased to represent the Department of Energy today and to present our views on alternative transportation fuels, which are vital to reducing our growing dependence on imports, improving environmental quality and decreasing emissions of greenhouse gases.

I will certainly discuss our position briefly on H.R. 2568, the Energy Policy Act Amendments of 1997. Thank you for entering my written statement in the record; I will try to briefly summarize that.

The U.S. transportation sector does remain 97 percent dependent on petroleum fuels and accounts for two-thirds of our oil demand. Vehicles and miles driven continue to increase. The emissions from transportation vehicles are, as has been pointed out, a major contributor to poor air quality. To effectively address these challenges, a revolution in transportation vehicle and fuel technologies is called for, one which will enable us to reduce our dependence on oil imports, reduce emissions and move toward transportation fuels that are sustainable in the long run.

The Department of Energy is attempting to set the stage for moving in new directions. Our programs include significant support for research and development related to alternative fuels, including fuels from renewable sources, ethanol and biodiesel in particular, and to advanced-technology vehicles.

Collaborative biodiesel R&D is being accomplished by private and government organizations. For example, we are supporting projects to lower the cost of biodiesel production. Our biodiesel life cycle analysis has recently been completed that inventories environmental emissions and energy flows. A health effects study is under way in conjunction with the National Biodiesel Board.

Our regional biomass energy program projects include one guided by the University of Idaho, which involves a 200,000-mile, over-the-road, heavy-duty biodiesel truck as well as Yellowstone National Park vehicle projects. As proponents for the increased use of biodiesel fuels, and I guess I would stress that we are proponents for increased use of biodiesel fuels, including blends, we are quite disappointed about the current situation, one which is marked by disagreements with other biodiesel supporters about how to achieve such increased use.

We do support the greater use of renewable fuels in particular. I believe we should accomplish this, however, not by providing more Energy Policy Act credits for vehicles, which may or may not use nonpetroleum fuels, but by providing real incentives to actually use replacement fuels, including the biodiesel portion of B20. Regarding H.R. 2568, we are, therefore, concerned about the provision to amend the Energy Policy Act by adding B20, a blend of 20 percent biodiesel and 80 percent petroleum diesel to the definition of alternative fuels without restriction. It is quite possible this provision could result in allowing all conventional vehicles designed to operate on petroleum diesel fuel to qualify as alternative-fuel vehicles under the act. This possibility exists because converting a diesel vehicle to enable use of biodiesel requires very little modification. Thus, covered fleets could claim that the diesel vehicles they acquire are, for the purposes of the act, alternative fuel vehicles.

H.R. 2568 includes other changes that would have negative impacts on our alternative fuel program. For example, the bill would make it easier to use converted vehicles and to decrease demand for new, original-equipment-manufacturer vehicles, and we are particularly concerned that were the bill to become law, vehicles not using any alternative fuel could receive more credits toward the EPACT-regulated fleet compliance than some dedicated alternative fuel vehicles.

The department believes it is appropriate, instead, to address these issues through the DOE's rulemaking authority, which is being accomplished in response to the petition made by the National Biodiesel Board and others to have B20 designated as an alternative fuel. This approach will allow further public comment on the issue as well as the introduction of regulatory options which could provide credit for using replacement fuels such as biodiesel.

There are a number of optional responses to the petition under consideration, which is one of the reasons that it has taken so long. These options have been reviewed to some extent in public forums. I would like to briefly outline those.

We could propose an unlimited designation whereby any vehicle that can operate on B20 would automatically qualify as an alternative fuel vehicle. We can propose designation of B20, given certain limitations and restrictions. Another approach is to create a replacement fuel credit option; and this gets a little bit further out of the box perhaps, which I think we might agree is where we need to be, whereby covered fleets could generate vehicle credits by using B20 or other replacement fuels.

Finally, the department could propose no action on the petition, but ask for public comment on the other options. I can assure you we are not pleased about the length of time required for the proposed rulemaking to be published. We are trying to develop a complete assessment of the situation and to consider a variety of competing viewpoints.

The issues relating to B20 in the context of the Energy Policy Act are complex and require analyses to examine the full cycle energy use, the petroleum use, criteria pollutant emissions and greenhouse gas emissions of B20, of neat biodiesel and baseline diesel fuels. Accomplishing this and getting agreements from all the people who have to concur on the rulemaking have indeed taken quite a while, and we hope that we will be presenting very soon the complete adequate proposal.

In conclusion, I would like to thank the subcommittee for inviting the department to discuss the important issues contained in H.R. 2568. We believe the bill does raise a number of important questions that need to be addressed by both the Congress and the administration.

Clearly, much more needs to be done if we are to attain the Energy Policy Act's aggressive replacement fuel goals, 10 percent of light-duty motor fuel use by 2000 and 30 percent by 2010.

The 1997 report published pursuant to section 506 of EPACT has already been mentioned. Without additional incentives or mandates or, heaven forbid, another oil crisis, fuel economics simply at this point in time continue favoring using lots more oil. However, we think H.R. 2568 does not address these issues in the comprehensive manner needed. Instead, key provisions of the bill introduce the risk of making it even easier to meet vehicle requirements while avoiding the use of nonpetroleum fuels.

After the proposed rulemaking is published, I hope we can meet with appropriate congressional staff and representatives of the biodiesel industry in another attempt to resolve the current impasse and to try to focus more on our common ground than on our differences.

Mr. Chairman, we look forward to working with your subcommittee to identify what measures can be taken.

[The prepared statement of Thonas J. Gross follows:]

PREPARED STATEMENT OF THOMAS J. GROSS, DEPUTY ASSISTANT SECRETARY, OFFICE OF TRANSPORTATION TECHNOLOGIES, ENERGY EFFICIENCY AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

I. INTRODUCTION

Mr. Chairman and Members of the Subcommittee: I am pleased to represent the Department of Energy today, and to present our views on the potential of alternative transportation fuels, and renewable fuels in particular, to help reduce our dependence on imported petroleum, improve environmental quality and decrease the emissions of greenhouse gases. I will also discuss our position on H.R. 2568, the "Energy Policy Act Amendments of 1997." I provided similar testimony before the Senate Subcommittee on Energy Research, Development, Production and Regulation, Committee on Energy and Natural Resources, on May 21, 1998.

II. ENERGY AND THE ENVIRONMENT—THE ROLE OF ALTERNATIVE AND RENEWABLE FUELS

Personal mobility is a distinction that sets the United States apart from many other countries. This year, Americans will drive more miles, to more places, in more vehicles than ever before. Personal mobility contributes significantly to our economy, cultural diversity, and strength as a nation. This mobility also presents the United States with major challenges, as we strive to respond to the ever-growing demand for transporting goods and services while simultaneously reducing adverse energy, environmental, and economic impacts.

The total transportation sector of the U.S. remains 97 percent dependent on petroleum fuels and accounts for two-thirds of our oil demand. The number of vehicles and miles driven continue to steadily increase. As a result, U.S. oil demand is rising, as is the demand in countries throughout the world. Meanwhile, worldwide oil reserves are becoming more concentrated in a smaller number of countries, many of which are politically unstable and opposed to U.S. interests. This situation leaves us increasingly vulnerable to the potentially serious adverse economic impacts of disruptions in oil supply.

The costs to the U.S. economy from a future oil price shock could be enormous. Based on analyses of previous oil supply disruptions, a number of recent studies have estimated the macroeconomic impacts as reducing U.S. economic activity by an average of over 2 percent per year for three to four years or more, which translates into gross national product (GNP) reductions in the range of six hundred billion dollars over three years.

There is also concern about the poor air quality in our cities and increasing emissions of greenhouse gases. According to the Environmental Protection Agency (EPA), 46 million Americans live in counties (mostly urban) which are not in compliance with air quality standards. This number is expected to increase in the coming decade with the recent tightening by EPA of national ambient air quality standards for ozone and particulate matter. Emissions from transportation sources remain a major contributor to this problem, accounting for approximately 58 percent of total U.S. criteria pollutants and one third of total U.S. greenhouse gas emissions.

In order to effectively address the above challenges, a revolution in transportation technologies is called for "one which will enable us to limit our dependence on oil imports and move toward transportation fuels that are sustainable in the long run. The Department of Energy and other Federal offices are working to accelerate this change. We believe we should do so in order to retain the U.S. leadership in science and technology which can support this important sector of our economy. At the Department of Energy, we believe that the increased use of alternative and renewable fuels, as well as vehicles with greatly increased fuel economy, can have a tremendous, positive impact in providing solutions to our growing dependency on imported petroleum and reducing the emissions of criteria pollutants and greenhouse gases.

III. DOE ALTERNATIVE FUELS PROGRAMS

The Department's alternative fuel program, within the Office of Energy Efficiency and Renewable Energy, is focused on four main areas: automotive R&D, truck R&D, transportation biofuels development and alternative fuels deployment. Goals of the Department's Transportation Technologies program are: (1) radically improved fuel economy of vehicles; and (2) the increased production and use of cost-effective alternative transportation fuels.

Our Advanced Automotive Technologies program is providing the technological cornerstone for the Nation's initiative to significantly improve the energy efficiency of, and reduce emissions from, our light duty vehicles. This program includes significant automotive alternative fuels R&D, including work on the cold-start and fuel-efficiency capabilities of ethanol vehicles and the development of improved, lower-cost natural gas storage. We have also supported substantial electric vehicle R&D, primarily the development of advanced batteries that can meet stringent technical and cost goals.

The strategy of the Advanced Heavy Vehicle Technologies R&D program is to focus primarily on improving the efficiency, emissions characteristics, and alternative fuel capability of the diesel cycle engine. Heavy-duty vehicle alternative fuels R&D activities include developing advanced enabling technologies such as fuel sensors, electronic valve timing, closed-loop feedback controls and electronic control systems necessary for the diesel engine to operate efficiently and with high performance on natural gas and other fuels such as natural gas-derived liquids, as well as renewable fuels such as biodiesel and ethanol-derived diethyl ether. Research tools developed for diesel fuel combustion R&D are applied in the investigation of the energy conversion efficiency and emissions from alternative fuels. Fuel formulation strategies focus on obtaining minimum emissions.

The Transportation Biofuels' research, development and demonstration activities are aimed at successful integration of renewable fuels, such as ethanol and biodiesel, into the transportation fuel mix, with a primary focus on ethanol. However, tha

Department's biodiesel research program helps support the existing biodiesel industry to invest in promising options to reduce future renewable biodiesel fuel costs. The projects developed result from meetings and planning accomplished jointly with the major stakeholders in the biodiesel industry: fuel providers, USDA research centers, Regional Biomass Energy Program managers, the National Biodiesel Board (NBB), state and federal regulators, and consumer stakeholders. The major effort currently being pursued is to develop process options for low cost waste feedstocks that could lead to the production of biodiesel at $0.70 to $1.50 per gallon, a cost that is nearly competitive with diesel produced from fossil fuels. The present cost of preducing biodiesel from virgin oil, such as soy oil, is estimated at $2.00 to $3.00 per gallon at the plant gate. However, other oilseed crops that possess a higher oil content may have more favorable economics on a regional basis, and could result in costs under $1.00 per gallon.

The Technology Deployment program is promoting the introduction, acceptance and commercialization of alternative fuel vehicles (AFVs) and advanced technology vehicles. The Energy Policy Act of 1992 (EPACT) establishes multiple goals for alternative fuel technology development and utilization. Relative to petroleum fuel substitution, the basic EPACT goal is to promote the development and use of domestic replacement fuels to substitute for imported petroleum motor fuels to the maximum extent practicable. Within the context of the basic program goal, DOE focuses its program on those replacement fuels which will have the greatest impact on reducing oil imports, improving the nation's economy, and reducing criteria pollutants and greenhouse gas emissions. The Department's successful Clean Cities program, which brings local communities, States, and industry stakeholders together to promote alternative fuels, is one of the hallmarks of our deployment efforts. Current activities of the deployment program include the expansion of the Clean Cities program to over 60 participating communities; production of additional technical information materials; completion of field test/evaluation of electric vehicles using first generation advanced batteries developed with support from the DOE/U.S. Advanced Battery Consortium; the annual placoment of 10,000 alternative fuel vehicles into the Federal fleet; and implementing the alternative fuel vehicle purchase requirements of the Energy Policy Act.

IV. DEPARTMENT OF ENERGY COMMENTS ON H.R. 2568

The Department has reviewed H.R. 2568, "Energy Policy Act Amendments of 1997," which was introduced in September 1997. The Department believes that H.R. 2568, and the similar Senate bill, S. 1141, represent an important contribution to a dialogue that should occur on how best to promote renewable transportation fuels such as biodiesel. Biodiesel has the potential to deliver significant benefits; specifically, it is renewable, it can reduce greenhouse gas emissions and it can also decrease emissions of particulate matter and carbon monoxide. However, at this stage in its development, it still has economic, technological and environmental barriers to overcome before it can fully realize its potential. Current biodiesel production costs do not enable biodiesel to compete on a cost basis with petroleum diesel fuel. In the longer term, production costs must be lowered to $1.00 per gallon or less. To address this issue, more R&D funding could be directed to achieving cost-effective, higher-yields of biodiesel by improvements in the soybean crushing and esterification processes, and the development of oilseeds with higher oil content. Another barrier that needs to be addressed is biodiesel's performance in cold weather. There is some evidence that biodiesel can experience cold-weather starting and fuel storage problems (due to fuel gelling). Environmentally, more R&D needs to be done to reduce the levels of nitrogen oxides (NO_X) in biodiesel emissions. Given biodiesel's attractive particulate matter reduction potential, reducing NO_X emissions below those of current diesel vehicles would make biodiesel vehicles an attractive emissions compliance option.

Although the Department is a strong supporter of the increased use of renewable fuels, such as biodiesel, we are concerned about the impact of several provisions in H.R. 2568.

In particular, we are concerned about the provision to amend EPACT by adding B20 to the definition of alternative fuels in an unlimited fashion. We have several specific comments regarding this provision. First, it could allow all conventional vehicles designed to operate on petroleum-derived diesel fuel to qualify as alternative fuel vehicles under the Act. This possibility exists because converting a diesel vehicle to enable use of biodiesel requires very little modification; thus, covered fleets could possibly claim that the diesel-fueled vehicles they acquire are, for the purposes of the Act, alternative fuel vehicles. As diesel vehicles continue to become more prevalent in the light truck market, we believe this provision could operate as a loophole allowing covered fleets to merely purchase conventional vehicles and declare them alternative fuel vehicles capable of running on B20.

The unlimited inclusion of B20 in the alternative fuels definition could also weaken the integrity of EPACT's light duty alternative fuel vehicle program by altering the present focus of concentrating alternative fuel vehicle demand on original equipment manufacturer (OEM) light duty vehicle offerings. The present program, based on EPACT's intent and consistent with our implementation, was set up to encourage the demand for light duty AFVs, with the intent of creating a "critical mass" in vehicle preduction that would achieve economies of scale, lower AFV incremental costs, encourage alternative fuel infrastructure investment, and cause spillover of AFV demand into non-fleet markets. The inclusion of a B20 compliance option using heavy duty vehicles could diffuse the present concentration on light-duty vehicles, create uncertainty in vehicle demand, and lead OEMs to reconsider their investments in AFVs.

Another important consideration is that H.R. 2568's designation of B20 as an alternative fuel could serve as a gateway that allows other blends with low non-petroleum content into the EPACT alternative fuel vehicle program. This could occur because designating B20 as an alternative fuel would make it easier for other petitioners seeking alternative fuels designation to lower their non-petroleum content and still make the case that their fuels should be designated as alternative fuels.

The Department believes it is appropriate, instead, to address this issue through the Department's EPACT rulemaking authority, in response to a petition submitted by the National Biodiesel Board (NBB). We recognize that the Department's response to the NBB's petition has taken quite a long time. However, the time required is due in part to the analyses and reviews needed to determine whether B20 meets the criteria established by the Energy Policy Act for designation as an alternative fuel. Steps were taken last summer to obtain comments on the issues involved, and the formal rulemaking process on the B20 petition will soon provide another opportunity. This approach will allow for public comment on this important issue and enable introduction of possible regulatory options that are under consideration.

There are other programmatic changes proposed by H.R. 2568 that could also have negative impacts on the alternative fuel program. For example, the provision to allow the expansion of allowances for converted vehicles could make it too easy to use conversions and decrease demand for new OEM vehicles. Also, the provision to allow credit for alternative fuel use in dual-fuel vehicles raises complex issues of tracking and enforcement and, more importantly, it would distort the "credit" value of dedicated vs. dual-fuel vehicles. A dedicated AFV, which represents an absolute commitment to alternative fuel use, would receive one credit, while a dual-fuel vehicle operating on the same alternative fuel would receive two credits. We would be happy to work with you to address these specific provisions and other portions of the bill.

V. NATIONAL BIODIESEL BOARD (NBB) PETITION

In September 1996, the National Biodiesel Board (NBB) filed a petition with the Department to initiate a rulemaking for the purpose of designating B20, a blend of 20 percent biodiesel and 80 percent petroleum diesel, as an alternative fuel under EPACT. Such a designation would add B20 to the list of alternative fuels contained in EPACT and would allow covered fleets to comply with fleet purchase requirements through the acquisition of vehicles that operate on B20. The Act grants the Department the authority to designate additional fuels as alternative fuels via rulemaking, provided that the Department finds that they are substantially non-petroleum, yield substantial energy security benefits and yield substantial environmental benefits.

In response to this petition, DOE issued a July 15, 1997 *Federal Register* notice soliciting comments on this issue. DOE also held a "facilitated" public workshop in St. Louis on July 31—August 1, 1997 to hear public comments on, among other things, whether DOE should propose the rule that NBB requested and, if so, what type of criteria should be employed to determine if a fuel should be designated as an alternative fuel. In response to the *Federal Register* notice, the Department received 80 written comments from interested parties.

Having considered the arguments made by NBB in its petition, and the public comments received in response to the July 1997 *Federal Register* notice inviting comment on the petition, DOE has decided to publish a notice of proposed rulemaking that will resolve the issue of whether B20 should be designated as an alternative fuel under the Department's Alternative Fuel Transportation Program regulations.

The Department is nearing publication of the proposed rule, and we can highlight some of the issues we are dealing with, as well as some of the options under consideration. First and foremost, we are developing methods to evaluate whether a fuel meets the criteria laid out in Section 301 of EPACT, that is, whether it is substantially non-petroleum and whether it yields substantial energy security and environmental benefits. We have performed analyses that examine the full-cycle energy use, petroleum use, criteria pollutant emissions and greenhouse gas emissions of B20, neat biodiesel and baseline diesel fuel. We also have reviewed other studies that examine some of the energy and environmental impacts of biodiesel. We will include the results of our analyses in the notice of proposed rulemaking and our interpretation of what constitutes the fulfillment of the Section 301 criteria.

There are a number of optional responses to the petition that are under consideration. We have discussed these options in public forums and will treat each of them in the proposed rule. Let me briefly review them here.

- The Department could propose an "unlimited" designation whereby any vehicle that can operate on B20 would automatically qualify as an alternative fuel vehicle under EPACT.
- The Department could propose designation of B20 given certain limitations and restrictions. These could include: (a) allowing credit for B20 vehicles only within the limits of the current medium- and heavy-duty credit program; b) allowing vehicle credits only for actual use of the B20 fuel; and c) requiring use of B20 in more than one vehicle in order to achieve one alternative fuel vehicle credit.
- The Department could propose to create a larger "replacement fuel" credit option whereby covered fleets could generate vehicle credits by using B20, or other replacement fuels, in lieu of alternative fuel vehicles.
- The Department could propose no action on the petition, but ask for public comment on the impacts of the unlimited and limited designation options.
- The Department could propose to deny the petition on the grounds that B-20 does not meet EPACT statutory requirements for alternative fuel designation.

VII. EPACT—LESSONS LEARNED

EPACT, among other previsions, established ambitious goals of displacing 10 percent of motor fuel use with replacement fuels by the year 2000, with this goal rising to 30 percent by the year 2010. To accomplish these goals, EPACT gave the Department authority to: require certain fleets to purchase AFVs; enter into voluntary commitments with vehicle manufacturers and fuel suppliers to develop markets for these fuels; and create an alternative fuel public information program. It also allowed the Federal government to develop labeling requirements for AFVs and alternative fuel refueling dispensers, and provided a set of tax incentives for the purchase of AFVs and the installation of alternative fuel infrastructure.

What we have learned in implementing EPACT is that it represents just the beginning, not the end, of a gradual process to promote alternatives to petroleum in the transportation sector. Original equipment manufacturers (OEMs) have responded to the actual and anticipated demand for AFVs, which resulted from EPACT, by making high-quality AFVs available in the marketplace in increasing numbers. Currently available models include compact and full-size pickup trucks; cargo and passenger vans; mini-vans; compact sport utility vehicles; delivery trucks; and subcompact, compact, mid-size, and full-size passenger cars. Fuels which can be used in available vehicles include 85 percent ethanol (E85), 85 percent methanol (M85), compressed natural gas (CNG), propane (liquefied petroleum gas or LPG), and electricity.

Despite the growth in alternative fuel infrastructure, and the encouraging commitment made by the OEMs to produce vehicles, alternative fuel use is still low as a percentage of total transportation fuel use. Total replacement fuel use, at 3.7 billion gasoline gallon equivalents, represents only 3.1% of total light-duty motor fuel use. Alternative fuel use, meanwhile, at approximately 300 million gasoline gallon equivalents, accounts for only 0.25% of light-duty motor fuel use. We still have a long way to go to make AFVs a fixture in the transportation sector.

How far we have to go is documented in several analyses performed and published by the Department during the last several years. In 1996, we published a report[1] that concluded that achievement of the Energy Policy Act goal of 30% replacement fuel use in 2010 would yield substantial energy and environmental benefits to consumers and the economy as a whole. But the report also documented that additional action would be required to establish the conditions, such as increased availability of alternative fuel vehicles and refueling stations, that would make the goal achievable.

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[1] "Technical Report Fourteen: Market Potential and Impacts of Alternative Fuel Use in Light-Duty Vehicles: A 2000/2010 Analysis." U.S. Department of Energy, 1996.

In 1997, the Department published and requested comments on a second report[2] that re-inforces the conclusion that the alternative fuels goals in EPACT will not be easy to achieve. For example, in order to achieve the Act's suggested 30% goal, sales of alternative fuel vehicles would have to grow to between 30 and 40 percent of total new light duty vehicle sales within the next several years; and stay in the 30 to 40 percent range for 10 or more years to put enough AFVs on the road. Our analysis indicates this scenario is very unlikely, and would establish unreasonable expectations for growth in vehicle sales and refueling station construction. The analysis indicates that more reasonable growth patterns could achieve the 30% goal by 2020, yet even this growth would require continued and probably expanded government programs to encourage alternative fuel vehicle use.

In addition to analyses performed in accordance with EPACT, the Department is also soliciting public comment on the Act's goals and the use of AFV fleet requirements. On April 17, 1998 the Department issued an advance notice of proposed rulemaking to determine whether local government and private fleets should be required, pursuant to section 507(g), to acquire alternative fuel vehicles. If DOE were to implement the program, covered private and local fleets would be required to purchase increasing percentages of alternative fuel vehicles beginning in model year 2002. DOE must make a determination on whether to proceed by April 2000.

A DOE decision to impose alternative fuel vehicle acquisition requirements on private and local government fleets is dependent on a determination that such requirements are "necessary" to achieve the 10 and 30 percent replacement fuel goals, or goals as modified by DOE under section 504 or 507(e). Further, if the replacement fuel goals, as modified, cannot be met through the combined efforts of all Federal, State, and local programs, then the Act does not permit DOE to go forward with the private and local fleet requirement.

The Department held three regional hearings on this issue this Spring, and obtained public comment on, among other things, the appropriateness of the 10 and 30 percent goals, possible problems in achieving the goals and what actions are necessary to achieve those goals. Over 50 witnesses provided comments during the hearings; in addition, written comments have been received from approximately 20 individuals and organizations. A primary aim of the public hearings and comment period is to solicit from the public possible regulatory and/or incentive-based actions the Federal government may take to increase the use of alternative fuel vehicles.

VIII. CONCLUSION

We would like to thank the Subcommittee again for inviting the Department to discuss the important issues contained in H.R. 2568. We believe that the bill raises a number of important questions that need to be addressed both by the Congress and the Administration, such as: (1) what is the appropriate level of the EPACT replacement fuel goals; (2) what are the best policy and program options needed to achieve the goals; (3) what combination of regulation and market incentives are needed to attain the goals; and (4) what additional program authorities are needed. Clearly, much work needs to be done if we are to attain the Act's alternative fuel goals. However, the key provisions of the bill run the risk of derailing much of the progress we have made by introducing opportunities to avoid purchasing alternative fuel vehicles as intended by EPACT. We believe that the goals of this legislation will be better served by continuing the rulemaking process that is already underway for biodiesel fuels. We look forward to working with this Subcommittee and the entire Congress to identify what additional measures should be considered.

Mr. SHIMKUS. Thank you, Mr. Gross.

I will next turn to Mr. John Campbell, Corporate Vice President of AG Processing.

STATEMENT OF JOHN CAMPBELL, CORPORATE VICE PRESIDENT, AG PROCESSING, INC.

Mr. CAMPBELL. Thank you, Mr. Chairman, Ms. McCarthy, members of the committee. I represent AG Processing, Incorporated, which is a soybean processing cooperative owned by 350,000 farmers. We dived into this biodiesel business by building a plant near Sergant Bluff, Iowa, although, Ms. McCarthy, the global headquarters of AG Environmental Products is in Lenexa, Kansas, so in your neck of the woods. And, Mr. Hall, we find a lot of oil in Texas with our cooperative, only it is not petroleum oil, it is soybean oil in Sherman, Texas.

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[2] Notice of Availability and Request for Comments, "Replacement Fuel and Alternative Fuel Vehicle Technical and Policy Analysis" pursuant to Sec. 506 of the Energy Policy Act, *Federal Register*, October 1997.

So much has already been said I feel like dispensing with my prepared remarks and taking questions from the floor, especially in response to DOE's testimony, which is quite surprising. The reason that we are all here is that DOE told us they didn't think they had the authority to do what needed to be done, and that if we wanted changes, we would have to get the legislative process going. That is why we are here, because DOE said they didn't have the authority to do what needed to be done.

We also have a petition that is 3 years in the process. Now, the issues aren't that complicated. If the answer is no, say no because you don't have the authority or whatever, and then bounce it back to Congress to deal with. But that hasn't been the case. It has just been a slow death by inaction. And so although we are pleased to hear that DOE would consider some of these things, they have had the opportunity to do that for months and months and months.

Also, it has been talked about a lot that EPACT is not going to meet its goals. I wish we were here to talk about—I wish we could be here to talk about a fuels program, but EPACT isn't a fuels program. It is primarily a vehicles program, and only through vehicles do we get to fuels. Unfortunately, we have thousands of AFV EPACT vehicles out there not burning alternative fuels.

We would be pleased to talk about a program that actually was fuel oriented rather than vehicle oriented because that fits our program perfectly. The fear that DOE has is that while it is too easy to convert a diesel engine is exactly the reason that fleet operators are interested. It is less expensive, it is easy, it is hassle free. So the idea that we have got a program that is too easy to comply with seems ironic when there are lots of vehicles out there that are not dedicated fuel vehicles, that are meeting the obligations of EPACT yet burn no alternative fuels.

It seems to me that we are more interested in the process than the product. So although, yes, everyone is meeting the letter of the law, we are not accomplishing the objective.

During the rulemaking process, many States requested that DOE, under the State implementation plan—alternative State implementation plan, use petroleum displacement as a measure of compliance, but DOE rejected that argument, again saying they didn't have the legislative authority. DOE has ensured the lack of production of biodiesel certified in warranted vehicles. Dedicated AFVs are, by definition, gaseous-fueled AFVs such as propane and natural gas vehicles. This excludes all renewable-based heavy-duty vehicles.

The committee had, I think, four questions that you wanted to ask, and I will quickly summarize what our answers are to those four questions. Neat biodiesel is a alternative fuel. There is no reason why it can't—a 20 percent blend can't be designated as an alternative fuel. There isn't a viable replacement fuel program. It is not on the table. To talk about it is to avoid the subject.

There are no technical or environmental barriers. The criteria laid out in EPACT to designate an alternative fuel can all be met by the 20 percent blends.

Thank you, Mr. Chairman.

[The prepared statement of John Campbell follows:]

PREPARED STATEMENT OF JOHN CAMPBELL, CORPORATE VICE PRESIDENT, AG PROCESSING, INC.

Good Morning, Mr. Chairman and members of the Subcommittee. My name is John Campbell and I represent Ag Processing Inc (AGP), a regional cooperative owned by 350,000 farmers. AGP is a diversified organization specializing in soybean processing, vegetable oil refining, and livestock feed and pet food manufacturing. Our cooperative is involved in the renewable fuel industry in two sectors: ethanol and biodiesel. AGP built and operates a biodiesel plant in Sergant Bluff Iowa and markets biodiesel through our partnership company Ag Enviornmental Products (AEP). I will focus my remarks today on biodiesel, B20, and H.R. 2568.

Biodiesel is a clean burning, oxygenated fuel made from methyl esters derived from soybean and other vegetable oils. It can also be made through the transesterification of recycled waste cooking oils. The fuel is fully compatible with diesel fuel and current diesel engine technology. Biodiesel blends even improve engine performance while reducing engine wear and emissions.

Diesel engines are, and for the foreseeable future will remain, the most energy and fuel efficient engine technology available. For this reason, diesel is likely to have an important role to play in the PNGV or "new generation of vehicles" that industry and government is researching. Unfortunately, the automobile industry is uninterested in investigating the contribution that renewable fuels could make to the PNGV program, relying instead on petroleum derived fuel cell technology and natural gas derived diesel fuels. In addition, engine manufactures agree that diesel fuels will need to be reformulated in order to meet the upcoming EPA emission requirements given the limitations of modern engine technology.

Though biodiesel is relatively new to the US, biodiesel has been used in Europe on a commercial basis for several years. In fact, Europe is far ahead of the U.S. in biodiesel use. Over 300 million gallons of biodiesel have been produced there. All major European engine manufacturers accept biodiesel for use in their vehicles. In Germany, it is sold neat and splash blended during fueling. In France, all petroleum diesel fuel is blended with 5% biodiesel before it is sold to enhance the quality of the petroleum diesel and to support energy security. Biodiesel is also being used at a 30% blend level in a number of French metropolitan bus fleets to improve urban air quality.

Biodiesel offers significant environmental benefits for air, water, earth, and energy. Biodiesel is non-toxic and biodegradable. It has the same toxicity of salt and solubility of sugar. It has even been used to clean up after oil spills in aquatic environments. As a renewable fuel derived from agricultural feedstocks, like ethanol, it reduces the net amount of carbon dioxide in the atmosphere mitigating the "Greenhouse Effect." A recent life-cycle analysis undertaken by the National Renewable Energy Laboratory (NREL), funded by USDA and DOE, demonstrates that "[b]iodiesel reduces net CO_2 emissions by 78.45% compared to petroleum diesel." The same analysis shows that the use of biodiesel in transportation engines will significantly reduce tail-pipe emissions of visible smoke, reduce particulate matter by 68%, carbon monoxide by 46% and will completely eliminate sulfur monoxide emissions. Using biodiesel in blends with petroleum diesel will offer proportionate reductions in emissions.

Biodiesel's other energy benefit lies in the production of biodiesel itself. The NREL life-cycle analysis has demonstrated that the production of biodiesel from soybeans offers a total net energy gain. Biodiesel *yields* 3.2 units of fuel product energy for every unit of fossil energy consumed in its life cycle. By contrast, this Nation *uses* 1.2 units of fossil resources to preduce 1 unit of petroleum diesel. This confirms the "renewable" nature of biodiesel and the contribution biodiesel can make to national energy security. Our intelligence, defense and commerce agencies have consistently warned, "petroleum imports threaten to impair the national security." The only reason that we haven't experienced a serious crisis from our growing dependency on imported petroleum in the past 20 years is due entirely to US military strength and actions. It is ironic that this same strength, as well as policies pursued by multinational oil companies and our own government, has only served to increase the dependence on oil imports from the Persian Gulf region to nearly double the level at the time of the first oil shock in 1973.

Shortly after the Persian Gulf War, in an attempt to deal with the imported petroleum dependence problem, Congress passed the Energy Policy Act of 1992 (EPACT). Unfortunately, implementation of this legislation has differod markedly from congressional intent. The stated intent of EPACT is to strengthen U.S. energy security by reducing the amount of imported oil used by the transportation sector by 10% by the year 2000 and 30% by 2010. The Department of Energy (DOE) readily admits that it sees no way to meet the longer-term goal given the nature of the current program. DOE will also readily admit that the reason why we will meet the year 2000 goal of 10% displacement, is because of the use of ethanol and other low-blend renewable-base petroleum additives under the clean air efforts directed by individual States and the Environmental Protection Agency. EPACT goals are being met by the Clean Air Act.

If EPACT is going to achieve its legislative mandate to reduce foreign energy dependence, both Congress and the Administration need to revisit its provisions and implementation. For example, fleets regulated under EPACT are not required or offered any incentives to actually use alternative fuels even though they are mandated to purchase alternative fueled vehicles (AFVs). I repeat, public fleets are forced to buy vehicles that manufacturers are indirectly forced to produce, but there is *no* requirement for them to actually use the fuels that the vehicles are certified to run on. During the rulemaking process, several states requested that DOE allow them, under the Alternative State Plans provision, to use petroleum displacement as a measure of compliance. Their sound logic was that DOE would be pleased with State plans that actually used alternative fuels. DOE flatly rejected these proposals.

Instead, DOE and the Administration continue to blindly focus on the requirement for public fleets to purchase AFVs. Furthermore, the mandates and incentive structures of the AFV purchase requirements, realistically exclude biodiesel as an option for EPACT fleet owners and operators. DOE allows State fleets to earn EPACT purchase credits on heavy-duty diesel engine AFVs *only after* they have fulfilled their light-duty purchase requirements. By only designating neat, or 100%, biodiesel as an alternative fuel, DOE has ensured the lack of production of biodiesel certified and warranted vehicles. Furthermore, to promote the inclusion of heavy-duty AFVs in the federal fleet, a recent Presidential Executive Order offers triple credits *only* for including dedicated heavy-duty AFVs. Dedicated AFVs are, by definition, gaseous-fueled AFVs such as propane and natural gas vehicles. This excludes all renewable-based heavy-duty AFVs.

DOE, and the Administration, maintain a bias against renewable fuels by arguing that they cannot control the level of renewable fuel that would be used in a renewable-based dual-fueled AFV. Yet, DOE currently *actively promotes* the purchase of dual-fueled natural gas AFVs that have two separate fuel tanks with a comparable 80 to 20% petroleum to alternative fuel ratio, while continuing to prevent the development of certified and warranted biodiesel vehicles that could displace the same ratio of petroleum using only one fuel tank instead of two.

To summarize and answer the Subcommittee's first specific point: neat, or 100%, biodiesel is an alternative fuel. However, despite two petitions and over 60 letters of support from Congress, *for 3 years,* DOE has refused to act on our request to designate a blend of biodiesel and petroleum as an alternative fuel. DOE knows full well that we have asked for B-20 because: a) it offers the greatest environmental benefit at the least cost to the user, and; b) American vehicle manufacturers will not build or warranty their vehicles for operation on neat biodiesel *but they have indicated their willingness to build and warranty vehicles on B-20.*

The other major provision of EPACT, and one that could actually result in a significant displacement of imported petroleum, is the replacement fuels program. Congress authorized the Secretary of Energy to establish "a program to promote the development and use... of domestic replacement fuels... to the maximum extent practicable... [to] ensure the availability of those replacement fuels that will have the greatest impact in reducing oil imports, improving the health of our Nation's economy and reducing greenhouse gas emissions."

But DOE has demonstrated no interest in developing a viable replacement fuels program. Instead of learning the lesson inherent within its own replacement fuels report—that the greatest degree of displacement and the only reason America is meeting its year 2000 EPACT goal is due to the use of alternative fuels in lower-blends in conventionally-based engines—DOE instead concluded that since a whole new nationwide fueling infrastructure and concurrent sales of over half a million (presumably dedicated) AFVs per year was prohibitively expensive, not to mention unwanted by the American public, DOE was forced to recommend pushing back either the level of displacement or the date for achieving the year 2010 30% displacement goal.

To summarize and answer the Subcommittee's third and second points respectively: DOE's AFV-centered approach is *not* responsible for our Nation's ability to meet the year 2000 10% displacement fuel goal; and, in conjunction with DOE's failure to suggest a viable replacement fuel program, guarantees the failure of our country in meeting the year 2010 30% displacement goal. A viable replacement fuel program, logically resulting from DOE's own facts and figures, would be to suggest that Congress mandate the use of renewable-based oxygenates in low blends for all vehicles at all times instead of only in gasoline vehicles operating in urban areas at times when air quality is particularly bad, as is the Congressional mandate for RFG use.

To answer the Subcommittee's last point: there are simply *no* significant technical or environmental barriers to the use of biodiesel fuel. Its only drawback for widespread use now is its price. Currently, biodiesel costs can average three times as much as petroleum diesel on a per gallon basis. However, this higher cost is mostly a symptom of the infant nature of the biodiesel industry. The increased research, development and use of recycled greases and other lower cost feedstocks, and the increasing number of fuel producers that will result from allowing biodiesel to compete on a level playing field with other alternative fuels, will generate greater economies of scale and lower transportation costs—all of which will lower the cost of biodiesel.

H.R. 2568 makes B20 an EPACT alternative fuel and creates incentives for the use of alternative fuels in dual-fueled AFVs, where none now exist. Credits for the use of alternative fuels in dual-fueled AFVs will apply to all alternative fuels and AFVs: biodiesel, ethanol, propane and natural gas. H.R. 2568 will not directly impact the budgets or spending of any public agency at any level of government. It will not create a new subsidy or tax break for farmers or biodiesel fuel producers. It will not require any public or private fleet to purchase B20 or B20 certified AFVs. What H.R. 2568 will do is give regulated fleets more choice and greater flexibility to meet the requirements of EPACT's AFV program, and in turn make that program more effective. I strongly urge this Subcommittee to report this legislation to the full Commerce Committee. Thank you, and I will be glad to respond to any questions.

Mr. SHIMKUS. We are going to—for information purposes, we are going to try to continue to go through the vote. It is a vote on adjournment, so we will see how fast our Hall of Famer is, and if he can get back here in time—but just for the—you can go vote. If anyone misses one, it will be me, depending upon Mr. Largent.

So we will now turn to Mr. Jim Gay, President, National Biodiesel Board and my constituent. Welcome. You need to pull the microphone close to you.

STATEMENT OF JIM GAY, PRESIDENT, NATIONAL BIODIESEL BOARD

Mr. GAY. Thank you, Mr. Chairman, members of the committee. I am a soybean farmer from Rockport, Illinois. I am President of the National Biodiesel Board, NBB. We are an association which is dedicated to the commercial development of biodiesel in the United States.

Since 1992, America's soybean farmers have invested over $22 million to develop biodiesel. Farmers, such as myself, donate their time to guide NBB's investment in biodiesel research and market development. My remarks today, which you have also in written form, reflect the views of the American Soybean Association.

I am here to endorse the passage of H.R. 2568, the Energy Policy Act Amendments of 1997. NBB believes that passage of H.R. 2568 will promote the successful commercialization of biodiesel in the United States by allowing vehicles capable of operating on 20 percent biodiesel-blended fuels to qualify as alternative fuel vehicles under the Energy Policy Act of 1992. As a result of DOE's history of inaction on this issue, NBB is convinced that Congress cannot leave the decision to the discretion of the Department of Energy.

I have been involved with this issue now since—very beginning actually, for almost 6 years, and I am very personally disappointed that in spite of all the efforts that have been undertaken to reach some kind of understanding with the department, we have not been able to do so.

In contrast, our efforts to work with the Environmental Protection Agency to develop a comprehensive health effects testing program have been highly successful and have been referenced, Mr. Chairman, by you earlier, which has proven the environmental benefits of biodiesel, which are very significant. This was a difficult test to develop, and we have been very pleased with that kind of cooperation.

H.R. 2568 is important to America's farmers. The use of B20 will add substantial value to our Nation's agricultural production. As a renewable fuel, biodiesel offers stable markets for efficiently produced oilseeds. According to a report published by USDA in 1996, a sustained market for biodiesel in the United States of only 50 million gallons a year would support the average price of soybeans by 7 cents a bushel, which would have resulted in the value of last year's soybean crop being increased by $168 million. And in addition to that B20 helps improve the environment and reduces dependence on imported oil, which of course is our ultimate goal.

Over 10 million miles of road tests have proven the performance, fuel economy and reliability of B20 vehicles. NBB believes that blending biodiesel with diesel is an effective tool to overcome the price resistance associated with developing an introduction of any new fuel. In our view, the policy option of blending is the most rational means of promoting the use of biodiesel, preferable to direct subsidies, tax breaks or government mandates, and will result in the greatest displacement of imported petroleum.

Many CNG vehicles are bi-fueled that qualify as alternative-fuel vehicles, and they have on-board storage of perhaps 20 to 25 percent of CNG, and the rest—in gasoline. These are dual-tank vehicles. There is no functional difference between a bi-fueled CNG vehicle with 20 percent CNG fuel storage capacity and a B20 vehicle that contains 20 percent biodiesel blended with conventional diesel. The only difference between these vehicles is that bi-fueled vehicles have two tanks and a blended fuel vehicle has one tank. Yet, under current law, the bi-fueled vehicle is an EPACT vehicle while the B20 vehicle is not.

Now, I am gratified that our competitors are confident of our success, and we see biodiesel as a complementary fuel in almost every market, and we think that that is certainly what is needed.

Mr. Chairman, the Energy Policy Act of 1992 is adopted to help our Nation increase our national energy security. Biodiesel is a domestically produced alternative fuel that can help immediately. B20 is key to bringing this fuel to market. H.R. 2568 will give fleet managers greater choice and increased flexibility to meet their EPACT requirements, and it will improve the environment and increase farm income at the same time. I think, as Mr. Campbell mentioned earlier, we would like to be here talking about programs which would aid in the production and development of all renewable fuels, because I think that is what we really need.

Thank you, and I will be happy to answer any questions.

[The prepared statement of Jim Gay follows:]

PREPARED STATEMENT OF JIM GAY, PRESIDENT, NATIONAL BIODIESEL BOARD

Chairman Schaefer and members of the committee: Good Morning. I am Jim Gay, a soybean farmer from Rockport, Il. I am the President of the National Biodiesel Board or NBB. NBB is a trade association based in Jefferson City, MO dedicated to the commercial development of biodiesel in the United States. Since 1992, America's soybean farmers, have invested over $22 million to develop biodiesel. Full time farmers such as myself donate their time as directors to guide NBB's investments in biodiesel research and market development programs. My remarks today will also reflect the views of the American Soybean Association on this important issue

Today I am here to endorse passage of HR 2568, the Energy Policy Act Amendments of 1997. NBB believes that passage of HR 2568 will promote the successful commercialization of biodiesel in the United States by amending current law to allow vehicles capable of operating on 20% and greater biodiesel blended fuels (referred to as B20) to qualify as alternative fueled vehicles under the Energy Policy Act of 1992. Passage of HR 2568 will *not* pose any competitive threat to the successful development of any other alternative fuel technologies. As a result of DOE's history of in-action on this issue, NBB is convinced that Congress can no longer leave this decision to the discretion of DOE. Congress must step in and act by adopting HR 2568. I will summarize my remaining remarks but I urge the members of the subcommittee to review carefully the full text of my written testimony.

HR 2568 is important for America and America's farmers. The use of B20 will add substantial value to our nation's agricultural production. As a renewable fuel, biodiesel offers stable markets for efficiently produced oilseed crops. According to a report published by USDA in the Fall of 1996, a sustained market for biodiesel of only 50 million gallons a year would support the average price of soybeans in this country by about 7 cents a bushel. Based on last year's harvested crop, that would have accounted for $168 million in farm income that can be derived from a new fuel that also helps improve the environment and reduces our dependence on imported oil. At a time when farm income is under tremendous pressure due to the collapse of export markets in the Far East and weather related disasters at home, the development of new domestic markets for our nation's agricultural products is indispensable to the health of our nation's farm economy.

Today because of a lack of developed markets, the retail cost of 100% biodiesel averages over $3.00 per gallon. Add to that cost, the cost of installing and maintaining separate biodiesel refueling and storage infrastructure and the costs of utilizing 100% biodiesel in the average EPACT fleet vehicle becomes prohibitive. However, biodiesel easily blends with diesel fuel. Once mixed together, biodiesel/diesel blends do not separate. Thus, biodiesel does not have to be used in its pure form. It can be blended with diesel to reduce fuel costs and eliminate the need for costly and redundant refueling infrastructures. The most successful biodiesel/diesel blend tested so far is the 20% blend. In over 10 million miles of road tests, the performance, fuel economy and reliability of B20 vehicles were shown to be similar to diesel.

NBB believes that blending biodiesel with diesel is an effective policy tool to overcome the price resistance associated with the introduction of this new fuel to the market. In our view, this policy option, blending, is the easiest and most rational means of promoting the use of biodiesel compared to other possible government policy options, such as direct subsidies, tax breaks and additional government mandates. We also believe that a policy promoting the blending of biodiesel with diesel in EPACT programs will result in the greatest potential displacement of imported petroleum by expanding the existing markets for alternative fueled vehicles

Bringing a new fuel to market is a long process. Since 1992, when the word biodiesel was virtually unknown, we have made significant progress in developing commercial markets for biodiesel in the US.

Along the way we have worked cooperatively with numerous federal agencies. Earlier this year, cooperation between the NBB and the EPA resulted in the successful completion of the first tier of an important testing program for biodiesel and biodiesel blended fuels. The EPA Fuels and Fuel Additives Health Effects Testing Program is the most comprehensive scientific testing program to measure the cumulative health and environmental effects of fuels and fuel additives ever devised by EPA. It was originally designed only for diesel fuel and gasoline. NBB worked with EPA to include biodiesel in this comprehensive environmental testing program.

The results of the first tier of testing demonstrate conclusively the environmental benefits of biodiesel and biodiesel blends. Major criteria pollutants like, CO, hydrocarbons, sulfur oxides, and particulate matter are all substantially reduced by biodiesel and biodiesel blended fuels compared to diesel fuel. Many unregulated pollutants suspected of contributing to formation of cancer were roduced by 75% to 99%. And the total ozone or smog forming potential of biodiesel was less than half that of diesel fuel. However, without the willingness of EPA to resolve technical and policy issues related to including biodiesel in this program, these spectacular environmental results would have been impossible to demonstrate.

In contrast to the cooperative reception we have received from EPA, for more than three years the USDOE has refused to consider any regulatory changes to existing programs that would have allowed biodiesel blended fuels to participate programs created by Congress specifically to promote the commercialization of alternative fuels. In particular this last year has been one of complete frustration with a lack of action on the part of the DOE to resolve any of the issues related to including B20 as an EPACT alternative fuel.

Last July, DOE held a public hearing related to the NBB petition to designate B20 as an alternative fuel. Of the more than 40 participants at that hearing, no one opposed the designation of B20 as an alternative fuel. Public comments by DOE representatives at that hearing clearly indicated that DOE would quickly resolve the issues related to B20. In September, representative of the biodiesel industry met privately with DOE officials. DOE officials presented an outline of potential regulatory changes that would have resolved many of the issues related to B20. In October, a letter from Acting Assistant Secretary Romm again publicly stated that DOE intended to resolve the B20 issue through a forthcoming rulemaking. In April of this year, in response to a letter from Sen. Tim Johnson regarding the status of the B20 rulemaking, Secretary Pena stated that a proposed rule would be published in May. In May, at a hearing before the Senate Energy and Natural Resources Committee, Deputy Assistant Secretary Gross promised a proposed rule within 30 days of the hearing. Today is 60 days after the Senate hearing and there is still no proposed rule regarding B20.

We have been one year, Mr. Chairman, since the DOE promised to resolve the issue of B20. The biodiesel industry has lost faith in any of DOE's promises to act. Even if a proposed rule was published tomorrow, we are confident, given DOE's past lack of action, that there would be no final action on that proposed rule for at least another year. Congress must step in now to act where DOE has consistently failed to do so. Even if this legislation is not perfect, it is far better to pass imperfect legislation than to leave the biodiesel industry in perpetual limbo waiting for the DOE to act.

Critics of B20 and HR 2568, including DOE, have raised phantom issues related to designating B20 as an alternative fuel. During my remaining time I'd like to address some of those issues.

First, DOE also likes to claim that biodiesel and blended biodiesel fuels such as B20 are qualified as "Replacement Fuels" under EPACT programs. However in October of 1997, DOE published a draft report for public comment on the Replacement Fuels program that it plans to submit to Congress. In the 76 pages of that report, the word biodiesel is not mentioned once. Even in the section on alternative and replacement fuels programs in other countries, DOE somehow forgot to mention that biodiesel is the most popular alternative fuel in Europe, with extensive blended fuel programs in France and numerous successful retail biodiesel refueling stations throughout Germany and Austria.

Next, DOE claims that B20 is not "substantialy not petroleum" so it can not qualify as an alternative fuel because of the diesel fuel component of the blend. Therefore under current DOE regulations, vehicles operating on B20 do not qualify as EPACT vehicles because only 20% of the vehicles' fuel supply would come from alternative fuel.

However, several existing and experimental bi-fueled natural gas vehicles that qualify as EPACT AFVs have minimal natural gas on board fuel storage capacity. According to DOE's own AFV Product Offering Guide, CNG is only 28% of the total on-board fuel storage capacity of the GMC Sierra bi-fueled truck. CNG is only 22% of the total on-board fuel storage capacity of the very popular bi-fueled Ford Contour. And remarkably, the CNG portion of the total on-board fuel storage capacity of the bi-fueled Volvo 850 is only 19% of the vehicle's fuel.

Bi-fueled CNG vehicles like these are clearly the norm and not the exception in today's alternative fueled vehicle market place. According to the EIA, more than three-quarters of all CNG vehicles sold in 1996 were bi-fueled vehicles. More than two-thirds of all AFVs sold in 1996 were either blended fuel or bi-fueled vehicles.

AFV consumers, including EPACT fleet managers, are clearly demanding alternative vehicles that incorporate a significant reliance on conventional fuels.

There is no functional difference between a bi-fueled CNG vehicle with only 19% or 22% CNG fuel storage capacity and a B20 vehicle that contains 20% biodiesel blended with conventional diesel. The only difference between these vehicles is that bi-fueled vehicles are manufactured with two fuel tanks and a blended fuel vehicle, like B20 has only one fuel tank. Yet under current law, the 19% bi-fueled vehicle is an EPACT vehicle while the B20 vehicles currently is not.

DOE has also suggested that the introduction of B20 vehicles would reduce market share for other alternative fueled vehicles and fuels. This is pure speculation. There is plenty of room for new competition in the EPACT market. In FY1997, federal government agencies fell almost 6000 vehicles short of their EPACT AFV purchase requirements. Estimates are that the federal government will once again fall far short of its EPACT purchase requirements in FY1998. With thousands and thousands of existing AFV purchase requirements going unfulfilled in the federal fleet alone, it is silly to argue that there is no room to provide additional alternative fuel choices for fleet managers to comply with the requirements of EPACT by using B20 vehicles.

Mr. Chairman, as US service men and women continue to risk their lives in the Persian Gulf region, we are all reminded that our nation's next energy crisis is only the launch of a single scud missile away. The Energy Policy Act of 1992 was adopted to help our nation increase its national energy security. Biodiesel is a domestically produced alternative fuel that can help our nation to immediately reduce its dependence on imported petroleum. Blended biodiesel fuels like B20 are the key to bringing this new fuel to market. HR 2568 will provide incentives to use B20 in existing EPACT programs without requiring any subsidies, tax breaks or additional mandates. Instead, it will give fleet managers more competition, greater choice and increased flexibility to meet their EPACT requirements. It will improve our environment and increase opportunities for greater farm income. I strongly urge swift passage of HR 2568.

Thank-you. I would be happy to take any questions you might have.

Mr. SHIMKUS. Thank you, Mr. Gay.

And we next turn to Mr. Gill Sperling, the General Counsel of the National Gas Vehicle Coalition. And we are doing a great job of keeping our comments to 5 minutes; I appreciate that. And there will probably be a change in the Chair, hopefully by the time you are done.

STATEMENT OF GILBERT P. SPERLING, GENERAL COUNSEL, NATURAL GAS VEHICLE COALITION

Mr. SPERLING. Thank you, Mr. Chairman.

I would like to thank the subcommittee for inviting me to testify today. I have to admit, it is a very strange feeling to be on this side of a hearing after having been counsel to this subcommittee more than a decade ago, but I am looking forward to the experience.

Before I begin my presentation, I would like to urge you, Mr. Chairman, and the other members of the subcommittee, to aggressively defend the jurisdiction of this subcommittee and that of the full committee. In my time as counsel to this subcommittee, I would have had my walking papers handed to me if I did not do everything possible to prevent the Appropriations Committee from legislating on matters within the jurisdiction of the subcommittee. I would hope that, at a minimum, all the members of the subcommittee would insist that the Commerce Committee be allowed to appoint conferees to the agriculture appropriations bill for purposes of this provision.

With respect to the issue before us, let me state that we believe that the use of nonpetroleum motor fuels is essential if our Nation is to improve air quality and to remove the dagger at the heart of our economy that currently is held by foreign oil exporters. Use of nonpetroleum alternative fuels is critical to eliminating the brown cloud of pollution that affects the over 100 million Americans living in urban areas and nonattainment status. For these reasons, we urge the Congress to provide the temporary financial incentives that are needed to help alternative motor fuels overcome the market entry hurdles they face. We believe these incentives should be provided based on the alternative fuel content of any motor fuel.

I echo the comments of the other members of this panel who encourage the development of a true fuels policy. Unfortunately, the bill introduced by you, Congressman Shimkus, not only would not help promote alternative motor fuels, it would actually undercut the market for all alternative fuels, including for biodiesel fuel. This bill would have the effect of making all conventional petroleum diesel fuel vehicles, quote, "alternative vehicles," even if they continued to operate solely on petroleum diesel. If this bill passes, there will no longer exist any incentives under EPACT, much less legal requirement, for anyone to acquire a true alternative-fuel vehicle or to use alternative fuels.

Let me explain.

Under the Energy Policy Act, an alternative-fuel vehicle is defined as a vehicle that is capable of operating on alternative fuel. With a limited exception of fuel-provider fleets that are required to operate their vehicles on alternative if it is available, the Energy Policy Act does not require fleets to actually use alternative fuels. By designating B20 as a alternative fuel, H.R. 2568 would have the effect of making every vehicle that is capable of operating on B20 a alternative-fuel vehicle under EPACT. This would not necessarily be a problem except for the fact that every vehicle that today operates on 100 percent petroleum-based diesel fuel also is capable of operating on B20 without any modification. With the wave of a pen, H.R. 2568 would make every diesel vehicle on the road today a alternative-fuel vehicle for purposes of EPACT.

It should come as no surprise to you that the environmental community is strongly opposed to designating B20 an alternative fuel, as is the alternative fuels community as a whole. I would like to ask that two letters that I have, one a joint letter from the American Methanol Institute, the Natural Gas Vehicle Coalition and the Propane Vehicle Council that was sent to the Senate last week in opposition to the inclusion of biodiesel legislation, the agricultural appropriations bill; and a joint letter of the Sierra Club, the Coalition for Clean Air, the Union of Concerned Scientists, the NRDC and the American Lung Association, both letters strongly in opposition to designating B20 as an alternative fuel be included in the record of the hearing.

Mr. SHIMKUS. Without objection, so ordered.

[The letters follow:]

American Methanol Institute
Natural Gas Vehicle Coalition, Propane Vehicle Council
July 16, 1998

The Honorable Thad Cochran
United States Senate
Washington, DC 20510

The Honorable Dale Bumpers
United States Senate
Washington, DC 20510

Dear Senators Cochran and Bumpers: We understand that the Senate may consider today an amendment to the Department of Agriculture Appropriations bill that would add the provisions of S. 1141 to that bill. S. 1141 would designate as an alternative fuel under the Energy Policy Act of 1992 ("EPAct") a fuel mixture that contains 80 percent petroleum and 20 percent biodiesel (B-20). The enactment of S. 1141 would be a major victory for imported oil and the opponents of alternative fuels. We urge you to oppose this amendment.

The alternative fuels provisions of EPAct represent some of the most significant federal policies to encourage the development of non-petroleum alternative motor fuels. The use of such fuels would reduce our nation's increasing and dangerous dependence on imported oil. In addition, the use of alternative fuels, including natural gas, methanol, propane and B-100, would substantially reduce air pollution, especially in urban areas. Hundreds of thousands of Americans will have shorter lives because of air pollution. Hundreds of thousands more will experience sharply curtailed outdoor activities because of air pollution. Approximately one-half of urban air pollution is attributable to the use of gasoline and diesel in motor vehicles.

Under EPAct, an alternative fuel vehicle is defined as a vehicle that *can* operate on an alternative fuel. Since any diesel-fueled vehicle *can* operate on B-20. S. 1141 would have the effect of making every diesel-fueled vehicle in America an alternative fuel vehicle under EPAct. Fleets that are required to acquire alternative fuel vehicles under the law could meet their obligations by acquiring conventional diesel-fueled vehicles. Unfortunately, EPAct does not require these vehicles to actually operate on oil alternative fuel. Fleets will not operate their diesel vehicles on B-20 because it costs more than petroleum diesel. Thus, S. 1141 would have the effect of allowing fleets subject to EPAct to meet their obligations by conducting business as usual. While the natural gas, methanol and propane vehicle industries would lose a critical market development opportunity, the ultimate losers would be those Americans who suffer the terrible effects of air pollution and the American workers who have lost their jobs to imported oil.

S. 1141 is a cynical attempt to repeal EPAct. It will not result in the use of a single gallon of biodiesel fuel. We urge you *not* to abandon the effort to reduce oil imports and improve air quality through the use of real alternatives to gasoline and diesel fuels. Please vote against the Craig Amendment.

John E. Lynn, *President & CEO, American Methanol Institute*
Richard R. Kolodziej, *President, Natural Gas Vehicle Coalition*
Joseph L. Colaneri, *Executive Director, Propane Vehicle Council*

Sierra Club, Coalition for Clean Air,
Union of Concerned Scientists,
Natural Resources Defense Council,
American Lung Association,
November 20, 1997

Mr. Paul McArdle
Program Manager
Office of Energy Efficiency and Renewable Energy, EE-34
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Mr. McArdle: We in the environmental and public health community have been made aware of the Department of Energy's consideration to classify B20 as an alternative fuel for use in motor vehicles. We strongly oppose this proposal. Designating B20 as an alternative fuel not only violates the letter and the spirit of the Energy Policy Act (EPAct), but would also *seriously undermine* current efforts to significantly reduce emissions caused by diesel-fueled vehicles.

The reasons for *not* classifying B20 as an alternative fuel are well founded by both precedent and a strict interpretation of EPAct. Specific alternative fuel requirements denoted in the EPAct are the following: the fuel must a) foster substantial environmental benefits, b) be substantially non petroleum, and c) promote substantial energy security benefits. B20 does not meet the EPAct requirements and therefore should not be classified as an alternative fuel. It is not substantially non-petroleum; B20 is primarily a petroleum product. Finally, we believe that B20 will not promote substantial energy security benefits, as it will provide a mechanism for petroleum to maintain its grip on the vast majority of our nation's motor vehicle fuel market.

One of the most important EPAct requirements mandates that the alternative fuels foster substantial environmental benefits. According to an SAE paper, emissions of various pollutants (except NO_X) decreased significantly as the percentage of biodiesel increased. See M. S. Graboski, Roll & McCormick, *Transient Emissions from No. 2 Diesel and Biodiesel Blends in A DDC Series 60 Engine*, SAE-961166 (1996). NO_X emissions, a leading source of health threatening smog, are unaffected in biodiesel blends with less than 35 percent biomass derived fuel. Accepting a fuel which is 80 percent diesel not only violates the EPAct requirement, it diminishes any efforts being made to reduce the pollution caused by diesel fuel use.

In addition, there is overwhelming evidence that diesel-fueled vehicles are the source of more than 40 percent of pollutants from motor vehicles and are also the primary transportation source of fine particulate matter (PM). Particles associated with the combustion of diesel, particulate matter that is 2.5 microns in diameter (PM 2.5), have been determined by a growing number of leading medical experts to be a major public health problem, contributing to the deaths of 40,000 to 64,000 Americans every year.

EPAct also mandates that an alternative fuel must be substantially non petroleum. Section 301(2), 42 U.S.C. 13211 (2) lists dedicated alternative fuels as well as blends of methanol, ethanol, and other fuels provided that they constitute at least 85 percent of the mixture. The biodiesel in B20 constitutes only 20 percent of the mixture, leaving 80 percent of polluting diesel to remain. It is unacceptable for a fuel which is 80 percent diesel to be classified as a clean alternative fuel.

The final EPAct requirement mandates that the alternative fuel promotes substantial energy security benefits. If DOE accepts B20 as an alternative fuel, fuel consumers will be more inclined to use B20. As the use of B20 does not require extensive initial capital costs due to existing infrastructure, the cost to implement true alternative fuel infrastructure will become prohibitive and the incentive to do so will diminish. The effort to achieve EPAct's petroleum displacement goal of 30 percent by the year 2010 will be undermined.

DOE must not classify B20 as an alternative fuel since it does not meet the requirements outlined in the EPAct. Less polluting, higher blends of biodiesel should be promoted and will put biodiesel on a level playing field with other alternative fuels (i.e. the 85 percent non-petroleum components required of methanol and ethanol). However, if B20 is classified as an alternative fuel, the incentive to make more expensive higher blends competitive will be eliminated. Most importantly, designating B20 as an alternative fuel will set a precedent allowing other substantially petroleum fuels, such as reformulated gasoline, to vie for designation as alternative fuels. The classification of B20 is neither legal nor beneficial per the overall goals of the EPAct and should not be approved. We look forward to hearing your response on this issue.

Sincerely,

PAUL KNEPPRATH, *American Lung Association of California*
LINDA WAADE, *Executive Director, Coalition for Clean Air*
GAIL RUDERMAN FEUER, *Senior Attorney, National Resources Defense Council*
DAN BECKER, *Sierra Club*
MICHELLE ROBINSON, *Union of Concerned Scientists*

Mr. SPERLING. Thank you.

Even where there are very few, if any, of the new alternative fuel vehicles under the bill that could operate on B20, because according to its promoter, B20 costs 30 to 40 cents per gallon more than conventional diesel fuel, this bill therefore would allow fleets to escape EPACT requirements by magically transforming their existing diesel fleet vehicles into alternative-fuel vehicles without requiring those vehicles to operate on B20.

To make matters even worse, under H.R. 2568, every one B20-capable heavy-duty vehicle would count as two light-duty vehicles for purposes of meeting EPACT alternative-fuel vehicle purpose requirements. This provision would allow most fleets to meet their EPACT requirements without acquiring a single alternative-fuel vehicle and without using a gallon of B20 or other alternative fuel.

We are at an absolute loss to understand what the supporters of this legislation believe the bill will do for the B20 market. In our view, it will create an escape mechanism through which affected fleets completely will avoid using alternative fuels.

EPACT already addresses the situation of a alternative fuel blended with conventional fuel. In the case of methanol or ethanol, there must be at least 85 percent by volume of these alcohols in the fuel. While DOE has limited authority to reduce this percentage to as low at 70 percent by volume, it can only do so if such reduction is necessary for reasons of engine start or other technical reasons. It would be unfair to ethanol and methanol to allow a blend that contains only 20 percent biodiesel to be an alternative fuel.

In conclusion, we are happy that DOE is now looking at biogas, natural gas that is derived from renewable sources including farm wastes. It will be nice—believe me, it will be nice to work with the farm community on an issue instead of being on the other side.

The Natural Gas Vehicle Coalition supports the increased use of all alternative fuels, including biodiesel. We would support DOE, designating B85 as an alternative fuel. We also believe that increased use of B20 is a positive, and we agree that there are serious problems with EPACT.

But H.R. 2568 will not fix these problems. To the contrary, it will undermine the market for alternative fuels, including B20. We would like to work with this subcommittee and with the biodiesel industry to develop responsible solutions to the problems that exist under EPACT. We need to reduce our reliance on foreign oil and to clean up the air now more than ever, and I look forward to answering your questions.

[The prepared statement of Gilbert P. Sperling follows:]

PREPARED STATEMENT OF GILBERT P. SPERLING ON BEHALF OF THE NATURAL GAS VEHICLE COALITION

Mr. Chairman, members of the Subcommittee, thank you for the opportunity to appear before you today. My name is Gilbert P. Sperling. Since the Natural Gas Vehicle Coalition's (NGVC) founding in 1988, I have served as its General Counsel. The Coalition's 200 plus members include vehicle manufacturers, heavy duty engine manufacturers, NGV component manufacturers and suppliers, natural gas distribution, transmission and production companies, environmental and non-profit advocacy organizations, and fleet operators. The NGVC is dedicated to developing long-term markets for NGVs and to the development of an NGV infrastructure, including fueling stations, manufacturing facilities, industry standards and industry training programs.

The NGV Coalition strongly opposes H.R. 2568 the "Energy Policy Act Amendments of 1997." This legislation, in effect, would eviscerate the alternative fuel provisions of the Energy Policy Act ("EPAct") by allowing every diesel vehicle in America to be considered an alternative fuel vehicle without requiring or *resulting* in the use of a single gallon of biodiesel fuel. Although it appears that the intent of this bill is to help the biodiesel industry, in effect, it would provide very little benefit to the biodiesel industry but cause significant harm to the other alternative fuel industries, *and this country's efforts to reduce petroleum imports and levels of air pollution.*

Our organization believes that the United States must reduce the use of petroleum in cars, trucks and buses. We believe firmly that this Committee had it right in 1992 when it took the lead role in crafting our nation's goals of reducing petroleum use by ten percent by the year 2000 and by thirty percent by the year 2010. This Committee always has worked to reduce America's dependence on imported oil and can continue to do so by not taking any further action on H.R. 2568.

Americans enjoy unparalleled freedom of movement and the economic prosperity that goes hand-in-hand with convenient and inexpensive travel. But, there is a price we pay for this freedom. Millions of Americans live in areas with unhealthy air quality. The incidence of asthma and other respiratory ailments is on the increase. These problems particularly impact the most vulnerable in our society, children and the elderly. In most urban areas, mobile sources contribute fifty percent or more of the pollutants that contribute to ozone pollution. Mobile sources also add to the air substantial quantities of particulate matter, toxic matter, carbon monoxide and, of course, carbon dioxide.

In addition to air quality related problems, our dependence on petroleum to fuel our transportation leaves us continually vulnerable to the political instability of the Middle East and other oil exporting regions. For the first time in years, our level of dependence on crude oil from the Middle East is rising. Annually, our government spends billions of dollars to ensure the stability of this region and to protect the oil supply lanes of the Persian Gulf.

Unfortunately, the price of gasoline and diesel at the pump does not reflect the cost associated with these negative consequences of petroleum use.

Mr. Chairman, the use of natural gas, methanol, propane, electricity, ethanol, biodiesel (B100) and other alternative fuels in vehicles is essential if we are to reduce our dependence on petroleum and ensure that our children can breathe clean air. We urge this Committee to be uncompromising in its support of efforts to encourage the use of these fuels.

Unfortunately, the "Energy Policy Act Amendments of 1997" is a step in the wrong direction. This legislation would undermine the national effort to increase the use of substantially non-petroleum alternative motor fuels. H.R. 2568 would designate a fuel that is eighty percent (80%) petroleum as an alternative motor fuel under the Energy Policy Act ("EPAct"). More than that, the enactment into law of H.R. 2568 effectively would destroy the alternative fuels programs of EPAct. An alternative fuel vehicle is defined in EPAct as a vehicle that is *capable of operating* on an alternative fuel. If H.R. 2568 became law, it would have the effect of making every diesel vehicle in America an alternative fuel vehicle because every diesel vehicle in America is *capable* of operating on B-20 with no modification. Fleets subject to the requirements of EPAct would need to make no changes to their diesel fleets in order to comply with the law. They could sit back and meet their obligations under EPAct without doing a thing. Not one gallon of petroleum use would be eliminated since EPAct does not require fleets to operate their vehicles on alternative fuels.

H.R. 2568 would not back-out the use of petroleum, as its supporter's claim. Make no mistake: this bill would reduce the use of natural gas, electricity and other clean burning fuels, *not* petroleum diesel. Let me explain. Currently, transit agencies across the nation are under pressure from local communities and elected officials to reduce harmful emissions from transit buses. At the same time, these agencies are strapped for funds, particularly capital funds for the acquisition of new equipment. Given the choice between a B-20 *capable* bus (in other words, a conventional diesel bus) and a natural gas bus that costs up to $30,000 more than a conventional diesel bus, we believe that transit agencies will opt for a B-20 capable bus. More than that, the transit agency will operate its "B-20" bus on conventional diesel fuel since *B-20 is more expensive than conventional diesel and EPAct does not require alternative fuel vehicles to be operated on alternative fuels.*

Unlike B-20, natural gas replaces one hundred percent (100%) of the petroleum that otherwise would be used in a dedicated bus, truck or other diesel vehicle since a dedicated natural gas vehicle can operate on natural gas only. Even a bi-fuel NGV is likely to operate on natural gas since natural gas costs less than gasoline or diesel. Fleets that acquire bi-fuel NGVs realize cost savings when operating on natural gas. In addition, these buses provide very substantial reductions in emissions of harmful pollutants. The same cannot be said B-20 capable buses, even if those buses actually operate on B-20. *It is our belief that all B-20 capable vehicles are likely to operate on petroleum diesel because of the cost penalty associated with using B-20.* With NGVs, petroleum use is reduced and air quality is improved. With B-20 capable vehicles, there will be no reduction in the use of oil and there will be no real environmental benefits.

The alternative fuel vehicle provisions of EPAct were carefully considered and crafted. The original version of the AFV provisions were offered by President Bush and refined on a bi-partisan basis by the Congress. The AFV program in EPAct is directed at alternative fuels that face significant market entry barriers. Through a balanced set of incentives and fleet requirements, the AFV provisions in EPAct are intended to help stimulate early demand for alternative fuels. Recognizing that the true costs of gasoline and diesel are not reflected in the price a consumer pays for those fuels at the pump, EPAct seeks to make non-petroleum fuels attractive to fleets and other vehicle owners.

Importantly, the non-petroleum fuels identified in EPAct face significant obstacles to market penetration. Unlike B-20, for which vehicles already are on the roads (every diesel vehicle on the road today is capable of operating on B-20) and a fueling infrastructure already exists, the alternative fuels identified in EPAct (including B-100) have neither vehicles nor fueling readily available. Hundreds of millions of dollars of investment have been needed—and still are needed—to design and manufacture natural gas, propane, methanol and electric vehicles. Even more investment is needed for the fueling infrastructure necessary for these alternative fuel vehicles to have the opportunity to gain consumer acceptance. It is these problems, the need for vehicles and fueling infrastructure, that the EPAct alternative fuels program is intended to address.

In addition, EPAct is flexible enough to include other fuels that face problems similar to those confronted by the natural gas, methanol, propane, electric vehicle and B-100 industries. Section 301 of EPAct, 42 U.S.C. § 13211, provides the Secretary of Energy authority to add new alternative fuels to the EPAct alternative fuels program. The statutory language of this provision gives clear meaning to Congressional intent when it comes to non-petroleum alternative fuels. Section 301 defines "alternative fuel" as:

> Methanol, denatured ethanol, and other alcohols: mixtures containing 85 percent or more (or such other percentage, but not less than 70 percent, as determined by the Secretary [of Energy], by rule, to provide for requirements relating to cold start, safety, or vehicle functions) by volume of methanol, denatured ethanol, and other alcohols with gasoline or other fuels; natural gas; liquefied petroleum gas; hydrogen; coal-derived liquid fuels; fuels (other than alcohol) derived from biological materials; electricity (including electricity from solar energy); *and any other fuel the Secretary determines, by rule, is substantially not petroleum and would yield substantial energy security benefits and substantial environmental benefits.*

Thus, to add a new fuel to the list of alternative fuels in EPAct, the Secretary must determine that the fuel is substantially non-petroleum, that it yields substantial energy security benefits and that it yields substantial environmental benefits. In other words, in providing the Secretary of Energy discretion to add new fuels to the list of alternative fuels in EPAct, the Congress made clear that the new fuel should have attributes similar to the fuels already designated by statute to be alternative fuels. B-20 fails this test.

First, B-20 is eighty percent (80%) petroleum. It simply is unreasonable to claim that a fuel that is eighty-percent petroleum is "substantially not petroleum." EPAct provides very clear guidance with respect to the inclusion of fuel blends. Fuels that are blended with petroleum products must be at least eighty-five percent (85%) non-petroleum by volume to be considered alternative fuels. This percentage only can be lowered for reasons relating to cold start, safety or vehicle functions, and then only to a minimum of seventy percent (70%) methanol or ethanol by volume. Moreover, there is nothing in EPAct or its legislative history to believe that Congress wanted one standard to apply to blends of alcohol with gasoline or other fuels and another to apply to fuels that are not alcohol.

Looking at this issue from the perspective of energy content as opposed to on a volumetric basis also does not help B-20's cause. In the case of blends of ethanol or methanol with gasoline, the substantial majority of energy content is derived from the alcohol-based fuel. In the case of M-85, approximately sixty-six percent (66%) of the energy content comes from methanol. Even if M-70 is considered, more than fifty percent (50%) of the energy content is from the methanol in the fuel.

Second, B-20 offers neither the energy security benefits nor the environmental benefits of the alternative fuels listed in EPAct. As stated previously, every diesel vehicle in America can operate on B-20. But B-20 costs more than conventional diesel fuel and there is no economic benefit to diesel vehicle operators that is large enough to offset this cost penalty. Therefore, adding B-20 to the list of alternative fuels in EPAct will not reduce the use of petroleum. Statements that B-20 will reduce petroleum consumption by twenty percent (20%) are just that—unsupported words. There is no credible evidence that this would happen.

Moreover, while EPA has concluded that a diesel bus modified with a new catalytic converter has lower emissions when operating on B-20, the reality is that the new emissions hardware is responsible for most of the environmental benefit. If the substantial environmental benefit test in EPAct can be so lightly met by adding a new catalytic converter, then the door is opened for nearly all fuels to be alternative fuels.

As the Subcommittee is aware, the sponsors of B-20 have attempted to convince the Secretary of Energy to use his discretion under Section 301 of EPAct to add B-20 to the Act's list of alternative fuels. Secretary Peña has forwarded a letter to Senator Johnson opposing S. 1141, the Senate companion to H.R. 2568. In that letter, Secretary Peña states that S. 1141 "could possibly allow conventional vehicles to qualify as alternative fuel vehicles under [EPAct], affect the nature of EPAct's light-duty alternative fuel vehicle program, and serve as a gateway for other blends with low non-petroleum content into the EPAct alternative fuel vehicle program."

The Department of Energy is not the only agency to express its concern about the impact of including B-20 as an alternative fuel in EPAct. Recently, the National Highway Traffic Safety Administration ("NHTSA") denied the petition filed by the National Biodiesel Board to classify B-20 as an alternative fuel for purposes of the Corporate Average Fuel Economy Program. According to NHTSA,

> "[b]iodiesel that is derived exclusively from organic material (neat biodiesel) is, under [the law], clearly an alternative fuel and NHTSA believes that the existing definition and regulations leave no doubt on this point. Biodiesel blends which are *substantially petroleum*, such as B20, are not alternative fuels under [the law] and the agency cannot deem them as such." (emphasis added)

In truth, if H.R. 2568 is passed, where do we stop? If B-20 is an "alternative fuel" what about B-10, E-10 or M-10? What rational ground exists to draw a dividing line? Congress addressed this issue when it included the words "substantially not petroleum" in the statute and set M-85 and E-85 as the benchmarks for blended fuels. Changing this benchmark to add B-20 would effectively eliminate all meaning from the term "alternative fuel" and eviscerate the alternative fuel vehicle programs in EPAct.

Conclusion

For these reasons, we urge the Committee to reject H.R. 2568. In crafting the alternative fuel vehicle provisions of EPAct, Congress thoughtfully analyzed the market penetration obstacles that confronted alternative fuels. The Congress balanced the needs for energy security and environmental benefits with the desire of industries promoting alternatives to gasoline and diesel to gain a share of the market for vehicle fuels. H.R. 2568 would undermine this balance. It would result in increase oil imports and increased levels of pollution without helping the financial wellbeing of the fuel industry it is intended to support.

Mr. SHIMKUS. I am going to just continue and miss my adjournment vote, which I hope will not be—hold me accountable.

Our next witness is Mr. Bob Sellers, Supervisor of Maintenance, Kansas City Area Transit Authority, and welcome.

STATEMENT OF ROBERT E. SELLERS, MAINTENANCE SUPERVISOR, KANSAS CITY AREA TRANSPORTATION AUTHORITY

Mr. SELLERS. Good morning, Mr. Chairman and members of the committee. My name is Robert Sellers, and I am here today in my capacity as a Maintenance Supervisor with the Kansas City Area Transportation Authority. I would like to thank you for inviting me to testify today. The Kansas City Area Transportation Authority operates 273 diesel-powered transit coaches in Kansas City, which provide mass transit bus service for the citizens of Kansas City and the surrounding metropolitan area. KCATA coaches operate over 7 million miles per year and consume over 2 million gallons of diesel fuel annually. As transit systems go, we represent mid-range in terms of number of buses and fuel consumed per year.

The KCATA has investigated a variety of options for meeting local, State and Federal clean air alternative fuel regulations. KCATA continues to evaluate the options which can provide the most cost-effective solutions for meeting its customers' needs while complying with these laws. As part of this effort, KCATA has been involved in a program to evaluate the use of biodiesel.

In March 1997, the KCATA was approached by Dr. Richard Nelson of Kansas State University and MARC IV Consulting, LLC, a consulting firm that works with the biodiesel industry, with a proposal to demonstrate biodiesel made from beef tallow in our buses. Beef tallow is a by-product of the beef packing industry, a leading industry in the State of Kansas and the Midwest in general. After some discussion and approval by the KCATA Board of Commissioners, the authority agreed to fuel four KCATA coaches with a blend of 20 percent beef-tallow-derived biodiesel and 80 percent conventional petroleum diesel fuel. Funding for the effort was provided by a variety of entities which included the Kansas Value Added Center, the Kansas Corporation Commission, the Fats and Protein Research Foundation, with the majority of the funds coming from the Western Regional Biomass Energy Program of the U.S. Department of Energy.

The test began in June 1997 and ended in March 1998. Biodiesel was delivered in tanker truck lots of approximately 5,500 gallons and blended and splash blended with the corresponding amounts of conventional diesel fuel needed to make it 20 percent biodiesel blend, or B20 as it is known in the industry. Four buses running on B20 ran over 90,000 miles and consumed 28,000 gallons of the blend in our test. I am here today to share the results of using biodiesel B20 with you.

The highlights of this test were the B20 was splash blended easily in existing tanks located in our adult facility with no modifications to tanks, pumps or other fueling infrastructure other than necessary to ensure that B20 buses were not inadvertently fueled with conventional diesel fuel.

No changes were made to the engines, buses or refueling system other than to ensure a separate system was used for the B20 for the test.

The fueling of the buses occurred normally, with no difference between the B20 fueling operations and the diesel fuel operation.

The B20 buses operated without incident, with no additional maintenance or service requirements compared to diesel fuel. Inspection of the injectors and engines after B20 use by KCATA maintenance staff showed no adverse effects of using B20.

Driver surveys regarding starting responsiveness, pick-up, power were positive for the B20 buses. The fuel economy of using B20 was similar to that of pure diesel fuel and varied from an increase of 2 percent to a decrease of 5 percent depending on the route, idle time and fuel calculation method.

No spare parts inventory, mechanic retraining test or ongoing maintenance was required for the test.

A visible reduction of black smoke occurred with the use of B20, and there was a noticeable improvement in exhaust odor.

This project generated positive response with the local citizens and the media.

KCATA found the use of B20 to be comparable to existing diesel operations and easy to implement. It was well received by the mechanics as well as the public, which is an important factor for KCATA as it moves forward.

This test has served to prove to KCATA that B20 is technically feasible. When considering the entire cost of operation, in other words, the cost of purchase of new buses, fueling infrastructure, mechanic retraining—which KCATA must do as a transit system—B20 represents a feasible, cost-effective option as an alternative fuel.

KCATA must consider all the options when making decisions on which technology and fuels to purchase in order to meet customer needs and various local, State and Federal regulations. I encourage Congress to designate B20 as a alternative fuel so that KCATA, as a transit agency, may have as many cost-effective, technically feasible options as possible available to it as we move into the next century.

Thank you for your attention to my testimony. I would be happy to answer any of your questions.

[The prepared statement of Robert E. Sellers follows:]

PREPARED STATEMENT OF ROBERT E. SELLERS, MAINTENANCE SUPERVISOR, KANSAS CITY AREA TRANSPORTATION AUTHORITY

Good morning Mr. Chairman and members of the Committee. My name is Robert Sellers and I am here today in my capacity as a Maintenance Supervisor with the Kansas City Area Transportation Authority. Due to the short notice I received to prepare for this hearing, my remarks will reflect my observations as a KCATA Maintenance Supervisor, but do not formally represent the views of KCATA. I would like to thank you for inviting me to testify today.

The Kansas City Area Transportation Authority operates 273 diesel powered transit coaches in Kansas City, which provide mass transit bus services for the citizens of Kansas City and the surrounding metropolitan area. The KCATA coaches operate over 7 million miles per year and consume over 2 million gallons of diesel fuel annually. As transit systems go, we represent the mid-range in terms of number of buses and fuel consumed per year.

The KCATA has investigated a variety of options for meeting local, state, and federal clean air and alternative fuel regulations. KCATA continues to evaluate the options which can provide the most cost effective solutions for meeting its customer's needs while complying with these laws. As part of this effort, KCATA has been involved in a program to evaluate the use of biodiesel.

In March of 1997 the KCATA was approached by Dr. Richard Nelson of Kansas State University and representatives of MARC IV Consulting, LLC, a consulting firm that works with the biodiesel industry, with a proposal to demonstrate biodiesel made from beef tallow in our buses. Beef tallow is a by-product of the beef packing industry, a leading industry in the state of Kansas and the Midwest in general. After some discussion and approval by the KCATA Board of Commissioners, the Authority agreed to fuel four KCATA coaches—two equipped with Detroit Diesel model 6V92 engines and two equipped with Cummins model M11 engines—with a blend of 20% beef tallow derived biodiesel and 80% conventional petroleum diesel fuel. Funding for the effort was provided by a variety of entities which included the Kansas Value Added Center (KVAC), the Kansas Corporation Commission (KCC), the Fats and Proteins Research Foundation (FPRF), with the majority of the funds coming from the Western Regional Biomass Energy Program of the US Department of Energy.

The test began in June of 1997 and ended in March of 1998. The biodiesel was delivered in tanker truck lots of approximately 5,500 gallons and splash blended with the corresponding amount of conventional diesel fuel needed to make a 20% biodiesel blend, or B20 as it is known in the industry. The four buses running on B20 ran over 90,000 miles and consumed over 28,000 gallons of the blend in our test. I am here today to share the results using biodiesel and B20 with you.

The highlights of this test were:

1. The B20 was splash blended easily in existing tanks located at our facility with no modifications to the tanks, pumps or other fueling infrastructure other than

that necessary to ensure the B20 buses were not inadvertently fueled with conventional diesel fuel.

2. No changes were made to the engines, buses, or refueling system other than to ensure a separate system was used for B20 for the test.
3. The fueling of the buses occurred normally, with no difference between the B20 fueling operations and the diesel fuel operations.
4. The B20 buses operated without incident, with no additional maintenance or service requirements compared to diesel fuel. Inspection of the injectors and engines after B20 use by KCATA maintenance staff showed no adverse affects of using B20.
5. Driver surveys regarding starting, responsiveness, pick-up, power, etc. were positive for the B20 buses.
6. The fuel economy using B20 was similar to that of pure diesel fuel, and varied from an increase of 2% to a decrease of 5% depending on the route, idle time, and fuel calculation method.
7. No additional spare parts inventory, mechanic retraining test or ongoing maintenance was required for the test.
8. A visible reduction of black smoke occurred with the use of B20, and there was a noticeable improvement in exhaust odor.
9. The project generated positive responso with the local citizens and media.

KCATA found the use of B20 to be comparable to existing diesel operations and easy to implement. It was well received by the mechanics as well as the public, which is an important factor to KCATA as it moves forward.

This test has served to prove to KCATA that B20 is technically feasible. When considering the entire cost of operation, in other words the cost of purchase of new buses, fueling infrastructure, mechanic retraining, etc.—which KCATA must do as a transit system—B20 represents a feasible, cost effective option as an alternative fuel.

KCATA must consider all of the options when making decisions on which technologies and fuels to purchase in order to meet customer needs and various local, state, and federal regulations. I encourage Congress to designate B20 as an alternative fuel so that KCATA, as a transit agency, may have as many cost effective and technically feasible options as possible available to it as we move into the next century.

Thank-you for your attention to my testimony. I would be happy to answer any of your questions.

Mr. ROGAN [presiding]. Thank you, Mr. Sellers.

And for those of you who wonder about career opportunities in government, I would note parenthetically that only in Congress could a Member wander aimlessly into a room, as I did a few minutes ago, and instantly be promoted to chairman of the committee. Keep that in mind as you are seeking your next career opportunities.

Our next witness is Mr. Russ Teall, Director of Legislative Affairs from the Biodiesel Development Corporation.

STATEMENT OF RUSSELL T. TEALL

Mr. TEALL. Thank you, and I certainly hope Mr. Shimkus made it in time for his vote.

As you stated, my name is Russ Teall. I am the Chairman for the Biodiesel Development Corporation. Our business has been to provide legislative and regulatory consulting, first of all to the largest biodiesel production facility in the United States, NOPEC Corporation, which in fact made the fuel that Mr. Sellers used out of the beef tallow and also looks at raising capital and developing new biodiesel plants throughout the United States. We think that with the passage of this legislation there is a significant opportunity for biodiesel facilities to spring up throughout the United States.

Mr. Schaefer asked us to primarily address the importance of this legislation in terms of the Energy Policy Act goals, and the goal, of course, is to displace a reliance on foreign petroleum; and the reason for that importance I think is pretty self-evident.

The president of the American Petroleum Institute was on the evening news a couple of months ago, and in response to one of Dan Rather's questions, he said, "Well, we have a 50-year supply of petroleum right now, given current levels of demand." And that was the part to me that was chilling, because the current levels of demand aren't going to be there for the next 20 years. We are going to see Third World countries and developing nations demanding their share of transportation technology and developing their own life-styles to the level that we have here in the United States. Given current levels of demand, we just aren't going to have enough petroleum.

We are going to have to face this sooner rather than later, and petroleum politics, as we all know, has led to the development of the Energy Policy Act back in 1992 with the Gulf War situation. It is still a continuing problem. It is going to be a problem in the future. So it is best to address this problem now to try to meet the goals of EPACT, rather than roll them back.

I think it is significant that the accomplishments in terms of displacing petroleum have occurred primarily because of the Clean Air Act in conjunction with the Energy Policy Act. No law exists in a vacuum. It all becomes part of the public code, and hopefully there is synergy between these different laws to help accomplish certain objectives.

The argument that by adopting the Shimkus legislation, all vehicles become alternative-fuel vehicles, I kind of have a mixed response to. I happen to think that that is great. The fact that you can easily implement an alternative-fuel strategy without replacing the entire transportation infrastructure in the United States, I would claim is a benefit, not as a criticism.

Now, instantly passing this law doesn't create these vehicles. The manufacturers still have to provide warranties, you still have to get EPA certification, you still have to comply with the requirements that are set up with other portions of the law.

Now, if these vehicles suddenly become alternative-fuel vehicles, Mr. Sperling's argument is that nobody is going to use the fuel because it is more expensive. Well, in point of fact, people do use the fuel. When they get a biodiesel vehicle, the U.S. Postal Service does, in fact, use the fuel, and the reasons are because of the requirements of other laws. If you want to reduce pollution and comply with the Clean Air Act and simultaneously comply with EPACT, what you are going to do is require an alternative-fuel vehicle run on that fuel and try to get it included in your State implementation plan. So you have got these two acts, as we have seen, working in concert together, so you have fuel use, a credit with EPACT for using that that fuel under the Energy Policy Act Amendments we are providing and an incentive under the Clean Air Act. So we are providing an opportunity here for these two pieces of legislation to work together.

Is biodiesel unique in that particular respect? I would submit no. If you look at the natural gas vehicles that are available, 77 percent of them are bi-fueled vehicles. That means that only 23 percent of them are dedicated vehicles that absolutely have to use natural gas. The other 77 percent have two tanks, as Mr. Gay pointed out, and if you look at the DOE's Web site, you will see that those tanks provide an average of 26 percent natural gas storage and 74 percent petroleum storage.

Now, why is that if people are going to use natural gas after they buy these vehicles that you provide 74 percent of your storage for petroleum? It is an interesting question. The answer that I have gotten from the different departments of transportation we have worked with is that the natural gas infrastructure just isn't there. If they go to a—or heavy-duty vehicle other than in a transit situation and they need to move these vehicles throughout the State as part of their maintenance program, they have to rely on conventional fuels.

Finally, I urge you to take action. We have been asked here again to sit and wait, and we have been sitting and waiting for 3 years. It is called death by delay. I don't anticipate any time soon the proposed rulemaking is going to be able to solve our problems. It is an invitation to further discussion, more public hearings and a dilution of the regulations and rules that we need that only Congress can provide for us at this point.

Thank you very much.

[The prepared statement of Russell T. Teall follows:]

PREPARED STATEMENT OF RUSSELL T. TEALL, CHAIRMAN, BIODIESEL DEVELOPMENT CORPORATION

Mr. Chairman and Members of the Committee, it is an honor for me to represent tho biodiesel industry at this important hearing regarding H.R. 2568, the "Energy Policy Act Amendments of 1997." Although I stand before you individually today, tho views which I am presenting represent a consensus among the leaders of the biodiesel industry, as represented by the National Biodiesel Board and the Biodiesel Coalition. My intention today is to vigorously support the passage of H.R. 2568 on behalf of the biodiesel industry.

By way of background I would direct your attention to the attached paper entitled, "Biodiesel as Part of a Sustainable Energy Policy" which was presented at the Third Annual National Clean Cities Stakeholders Conference last June. To summarize from that article,

> "Biodiesel is a renewable, biodegradable resource which can be effectively utilized as part of a sustainable energy policy for any region of the United States... It is virtually nontoxic and has been listed by the USDA as a food processing agent for human consumption. As a substitute for, or additive to, petroleum diesel it can reduce emissions of NO_X, CO, hydrocarbons and particulates.
>
> Biodiesel is made from first use and used vegetable oils, and tallow. The first diesel engines developed by Dr. Rudolph Diesel were run on peanut oil. Biodiesel can be used in modern diesel engines without conversion which means that the existing infrastructure, including vehicles and fueling facilities, can be used with little or no modification."

Several biodiesel producers have processes which use recycled cooking oils from restaurants and animal fats from slaughter houses. These waste products offer even better environmental returns. Biodiesel "closes the loop" by utilizing waste products to preduce a clean burning alternative to petroleum diesel. Combined with the use of virgin soy and canola oil, these mixed feedstock technologies will lead to substantial roductions in the price of biodiesel.

Biodiesel is also virtually nontoxic and is the only recognized alternative fuel to successfully complete Tier 1 Health Effects Studies established by the US Environmental Protection Agency. In addition, biodiesel helps reduce greenhouse gases. As a surface source of hydrocarbon it has been estimated by a French biodiesel lifecycle study that for every gram of CO_2 produced by burning biodiesel, three grams of CO_2 are absorbed by the plants which are grown to preduce the feedstock oil used in biodiesel preduction. Compare this to petroleum and the other fossil and gaseous fuels that are non-renewable, finite resources and when burned introduce new CO_2 and hydrocarbons into the surface atmosphere from subterranean sources.

The focus of H.R. 2568 is to define B20 (a 20% blend of biodiesel with 80% petroleum diesel) as an alternative fuel. B100 (100% biodiesel) is currently the only form of biodiesel qualifying as an alternative fuel; blended biodiesel in any proportion is not recognized in spite of over three years of requests by the biodiesel industry.

To answer the Subcommittee's first specific point: biodiesel blends with a minimum volume of 20% and greater of biodiesel *should* be designated as "alternative fuels" under the Energy Policy Act of 1992 (EPACT). This would allow vehicles that are warranteed and certified to run on whatever blend level the manufacturer chooses, above 20%, to qualify as biodiesel alternative fueled vehicles. I would like to point out that to date, no *American-made* diesel engines are so warranteed and certified. It will take passage of this legislation to create the market incentives for the engine manufacturers to make biodiesel vehicles just like it took EPACT's original passage to create ethanol, propane and natural gas vehicles.

As Subcommittee members know, one of the primary objectives of EPACT is to reduce the US reliance upon imported petroleum for transportation fuel. EPACT requires the U.S. Department of Energy (DOE) to help find a way to displace 10% of our reliance on imported petroleum by the year 2000 and 30% by the year 2010. These are very ambitious objectives and are going to be very difficult to achieve given the current programs. I feel that these objectives are also a very good indication of "congressional intent" as to what "substantial" means in terms of the petroleum displacement language regarding "substantially not petroleum." The truth is, that this criticism is labeled against B20, or any number less than B100, by the private and public interests that want to keep biodiesel out of what they consider to be "their" program. Otherwise, how could DOE say that 30% is "substantial" enough, in terms of income, to require a fuel producer to purchase alternative fuel vehicles but is not "substantial" enough to allow that fuel producer to realistically participate under those same laws and regulations?

Current DOE and EPACT standards require public and fuel producer fleets to purchase an increasingly large number of alternative fueled vehicles. These same mandates may soon be extended to municipal and private fleets as well. *However, although there is a vehicle purchase requirement, there is no requirement for most of the regulated fleets to actually use alternative fuels* (the only fuel use mandate under EPACT is for the alternative fuel producers themselves). The objective of EPACT is to displace our reliance upon imported petroleum, yet the implementation strategy is to require the purchase of vehicles which may or may not actually be run on alternative fuels.

The alternative fuel vehicle purchase requirements were meant to encourage the development of alternative fuel technologies—both vehicles and fuels. All indications from domestic vehicle manufacturers, unlike their European counterparts, are that they would be interested in developing certified and warranted vehicles which are optimized for B20 use, but that they are not interested in optimizing vehicles for B100 or neat biodiesel. Designating B20 as an alternative fuel will attract the vehicle manufacturers to build, certify and warranty the next generation of clean burning B20 vehicles. There has already been a substantial improvement in emission reductions with the new diesel engine designs. If B20 is approved as an alternative fuel there will be even more incentive for engine manufacturers to improve existing and future engine lines to take advantage of the superior emission characteristics of B20; characteristics which actively complement and enhance the effectiveness of passive emission reduction technology.

As we look to build the bridge to advanced clean transportation technology, the question becomes: how expensive of a bridge de we want to build? Advanced propulsion systems under PNGV and fuel cells seem to hold the most promise. Is it reasonable then to promote vehicles which require a complete replacement of the existing transportation infrastructure if there are less expensive and more effective alternatives? To implement a total natural gas, propane or electric vehicle strategy now means that all existing vehicles, fueling and distribution infrastructure and maintenance must be replaced at tremendous cost. Focusing on alternative fuels which are compatible with existing infrastructure and technology makes much more sense. As America's domestic renewable fuels, both biodiesel and ethanol qualify in this regard.

Yet current government policies for the implementation of EPACT stress a dedicated vehicle approach. The Executive Branch, despite Congressional language to the contrary, openly favors dedicated vehicles over dual-fueled vehicles which can run on alternative fuels and petroleum or a blend thereof. Time and time again at every public hearing DOE has held on EPACT, the regulated fleet owners and operators have made two things clear: one, they overwhelmingly prefer dual-fueled vehicles of *both* types—gaseous-fueled and renewable-fueled; and two, they want some kind of credit or incentive for alternative fuel use. DOE could, if it so chose, meet those needs through its implementation of EPACT's alternative fuel vehicle purchase credit system and through EPACT's replacement fuels program. But DOE has failed to do so because of government preferences for expensive dedicated vehicles, exponsive new fueling infrastructure and the perceived need to promote gaseous fuels instead of renewable fuels.

So, to answer the Subcommittee's second point: no, DOE has not developed an effective alternative fuel vehicle program or an effective replacement fuels program. And I don't say this simply because DOE conveniently "forgot" to include biodiesel in their replacement fuels report to Congress, even though DOE had already designated neat biodiesel as an alternative fuel and a replacement fuel. I say this because DOE admits in its own report that the vehicle-centered approach will not achieve EPACT's 30% by the year displacement goal.

To answer the Subcommittee's third point: no, I de not believe that DOE can take credit for meeting the 10% by the year 2000 displacement goal. Again, in DOE's own replacement fuel report, the Energy Information Agency has reported that the only reason we are close to achieving the 10% displacement goal is because of the reformulated gasoline requirement under the Clean Air Act.

Going back for a moment to the Subcommittee's second point: if DOE had wanted to suggest a viable replacement fuel program they would use their own information as the basis of a report to Congress to suggest that Congress require an appropriate blend of oxygenates derived from domestically produced renewables in *all transportation fuels at all times* instead of only when necessary to improve the emissions of gasoline vehicles during periods of bad air quality in specific regions.

Finally, to answer the Subcommittee's last point, B20 makes sense environmentally, technically and economically. We all live in a world of limited funds. If money were not a consideration, we could move immediately to fuel cell powered buses at over $1,000,000 each, but this is not practical. We must optimize our environmental budget and get the biggest "bang for the buck." In terms of particulate matter emissions from diesel engines, with which there are increasing environmental and health-related concerns, biodiesel use leads to substantial reductions. B20 provides for 50% of the total particulate matter reductions available from B100. In other words, there is a much better environmental return on your investment, if you have a limited budget, to use B20 in five vehicles than to use B100 in one vehicle.

B20 has been extensively tested by fleets all over the globe, with over 30,000,000 miles of demonstrations. It is easy for fleets to implement because all the existing infrastructure remains in place, and it is only the fuel which changes. B20 performs as well or better than petroleum diesel in terms of power, torque, range and carrying capacity. It has both higher cetane and better lubricity than petroleum diesel. Unlike its gaseous-fueled competition, biodiesel can be used in existing vehicles with minor modifications, in existing fueling infrastructures, stores and handles more safely than any other alternative and does not require the retraining of mechanics and drivers. No wonder they oppose our inclusion in EPACT!

The only drawback to biodiesel use is economic: its cost. However, there currently are only seven registered biodiesel producers in the United States with a total production capacity of 50,000,000 gallons. These seven biodiesel producers are operating at substantially less than 10% of capacity. Because B100 is currently the only biodiesel standard approved by DOE not only are there no biodiesel vehicles being developed by manufacturers, there is a substantial likelihood that many of the existing biodiesel producers will go out of the biodiesel business in the near future. If B20 is adopted, it will significantly stimulate the market, absorb current production capabilities, encourage the regional development of new biodiesel production facilities and reduce transportation costs in shipping fuel to consumers.

B100 can cost $2.70 to $4.50 per gallon delivered. B20 represents a $.34 to $.70 per gallon increase in the cost of fuel. This may seem expensive when compared to petroleum diesel, but it is considered a reasonable expense for coming into EPACT compliance by mandated fleets. With the adoption of B20 the cost of pure biodiesel developed from mixed feedstocks can be expected to drop to $1.80 to $2.50 per gallon, or a relative increase for B20 of $.16 to $.30 per gallon. At this price, consumer markets may also start to use B20 as a premium diesel fuel, just as consumers now pay $.20 to $.30 per gallon more for premium gasoline.

The only major argument mounted against H.R. 2568 has been made by other alternative fuels which are trying to protect their slice of the pie. These other alternative fuels already enjoy tax incentives and supports which are not available to biodiesel. Ethanol has a very substantial, tax subsidy for producers; natural gas benefits from substantial subsidies for new vehicle purchases and new fueling infrastructure development, as well as tax breaks for the fuel itself; electric vehicles have similar subsidies for vehicle purchases and infrastructure development.

In addition, alternative fuels such as natural gas, electricity and propane have significant non-transportation markets, such as power generation and industrial use, which sustain their industries and in fact may be better uses for their products. Biodiesel is dedicated to the transportation fuel market and we will live or die depending upon that market. We are a relatively new fuel in the United States and need the time to mature, as the other alternative fuels have had, in order to survive. Furthermore, our only transportation market is with diesel vehicles, which are predominantly medium and heavy duty vehicles, whereas the other alternative fuels can target gasoline and diesel powered vehicles in all categories.

The legislation before you creates a level playing field in EPACT for biodiesel. It does not create any new mandates or tax subsidies. It takes a flawed program and makes it better. The requirements to purchase alternative fuel vehicles already exist. What H.R. 2568 does is create new ways for fleets to come into compliance with EPACT, by giving regulated fleet managers and owners more flexibility.

By adopting H.R. 2568 market forces will determine which alternative fuels and alternative fuel vehicles are best suited for each vehicle category in each fleet in each region of this country. Without this bill the biodiesel industry will not survive. The chance to develop a domestically preduced, renewable and sustainable fuel now will be postponed to the point where it could be too late. The next Middle East crisis or Arab oil embargo could devastate the US economy unless we are prepared to do without imported petroleum. Helping to establish the biodiesel industry now, will help future generations of Americans avoid or mitigate the petro-political conflicts which are inevitable as finite fossil resources diminish and demand for those resources from the Far East increase. The opportunity today is to have the vision to see the inevitable increasing demand and depletion of fossil fuels and to prepare ourselves by nurturing the development of biodiesel as a domestically produced, sustainable alternative.

Thank you for your attention and consideration of this important pieco of legislation. I am open for any questions.

Mr. ROGAN. Thank you, Mr. Teall, and I thank the distinguished panel for coming and joining us today.

I do have a couple of questions. I would like to start first with Mr. Gross.

Mr. Gross, I was looking earlier at the definitions or the criteria within the definition of "alternative fuel," and two of those three criteria require that the fuel must yield substantial environmental benefits and substantial energy security benefits.

Does biodiesel meet these criteria?

Mr. GROSS. This will be addressed in the proposed rulemaking. We have done the analyses and commissioned studies on the subjects related to these criteria, and let me say that it does look like, on the basis of those studies, there would be substantial energy security benefits and substantial environmental benefits from biodiesel.

Mr. ROGAN. Does this have to do with whether it is substantially not petroleum?

Mr. GROSS. The third criteria—and it is substantially nonpetroleum, and that becomes more difficult with respect to making a finding under the legal determinations of the Energy Policy Act to arrive at a finding of substantially nonpetroleum for B20.

Mr. ROGAN. At the risk of playing musical chairs, I regret I have a vote in the Judiciary Committee markup, so I am going to excuse myself for a moment and turn the chair back over to my colleague from Illinois.

Mr. SHIMKUS [presiding]. Except for angering my staffers, I think it is only fair that I turn the next round of questioning to my cosponsor, Ms. McCarthy.

Ms. McCarthy. I don't want to anger your staff, because they are a delight to work with, but while you catch your breath—it must have been quite a sprint.

Mr. Shimkus. I made it.

Ms. McCarthy. Congratulations. Let me pursue, if I might, the questioning with Mr. Gross, because there were a number of issues raised in the testimony today that were, I think, helpful to me and a couple that I would like to pursue with you.

You did raise a concern in your testimony about the issuing of credit for replacement fuels, and I wonder if we could explore that a little bit more. Because I know it is of concern to you that while you have—you and the Department have spent a great deal of effort and time to try to put in place the law from 1992 that requires conversion of technology as well as use of these alternative fuels and those credits are in place, I sensed a concern that bringing this new B20 alternative on board would confuse that use of credits.

Could you explain that a little bit further to the committee and also thoughts you might have on how to solve that concern?

Mr. Gross. I would be happy to convey our understanding of what divisions this bill would entail with respect to the credits program.

We have, of course, been on the firing line with respect to implementing the fleet provisions and developing the regulations applying to credits. And one of the—I guess, the primary concern with the bill is that we feel it would move in the wrong direction with respect to providing credits for vehicles that don't use an alternative fuel or other replacement fuel, rather than providing more assurance that the fuel itself would be used specifically.

There would be an additional credit provided for a heavy vehicle over 8,500 pounds, so there would be two credits for a heavy vehicle capable of using B20 under this bill. There would be an additional credit provided for use of the fuel in a dual-fuel vehicle, but not an additional credit for use of the fuel in the dedicated-fuel vehicles. So there would be a distortion in terms of providing greater incentive for dual fuel rather than dedicated.

And, of course, our objective might be to move more strongly toward getting dedicated fuel vehicles into the marketplace.

These are some of the problems that we have with the credits as contained in this particular bill.

Ms. McCarthy. I at least can speak for myself, as a cosponsor, would be willing to work with your Department to try to come up with a credit system that is going to further the program and to not discourage the State fleets from continuing the process of acquiring dedicated-fuel vehicles, all the while when there can be immediate use of B20—allow that as well as they move toward budgetary availability of these vehicles that we know for the long-term will meet those environmental goals very successfully. And I think there are others willing to work to try bring about this particular issue.

And I wonder, Mr. Chairman, if there is anyone else on the panel that would like to respond to my question? I would be most welcome to hear those responses.

Mr. Teall. Maybe just in terms of clarification. But I think, to understand the existing law, the only people right now that are required to actually use the fuel are fuel providers. The State and Federal Government and their fleet are only required to purchase vehicles. So it is a credit for the purchase of a vehicle, not a credit for the use of the fuel.

This would be the first time in this bill that there is a credit given for actual fuel use. It is the first step toward an incentive-style program in terms of the substantially not petroleum for the fuel providers.

That word substantial was interpreted by DOE to mean 30 percent of their business. So 30 percent as a number was enough to regulate, but it is not enough to participate in terms of a low-blown fuel. There are additional credits now given for medium- and heavy-duty dedicated vehicles under an executive order, because those vehicles theoretically displace more fuel. They get double and triple credits right now.

So there is no need in this legislation to provide a further credit structure. They already have it.

What this bill does is it provides parity for vehicles that are going to be using the fuel.

Mr. SPERLING. I can't agree with the last comment. The reason there are extra credits on the heavy-duty side, at least according to the DOE documents that supported that for dedicated vehicles, is those vehicles can only operate on the alternative fuel. In the case of the natural gas, the fuel costs less, much less, than diesel fuel, so you have a financial incentive combined with the credit.

In the case of this legislation, there are simple credits for being capable of operating on the fuel, regardless. If you want to fix this problem, do it the same way it works for dedicated vehicles that can operate only on this fuel, is provide the credit only for vehicles that are certified as capable of operating only on the B20 mixture and provide the credits for the actual use of the fuels so that you know it is being used.

Mr. TEALL. That is an impossible requirement. He is asking us to do something that is physically not possible, to generate a vehicle that can sense whether it is running on B19 or B21 and if it only operates on B20 that we can move forward.

We have to look practically at this. Already there are fuel-use reporting requirements for the Federal fleets. You can look at the numbers and see that a fleet used 100,000 gallons of diesel, 25,000 gallons of biodiesel and say they use B20.

It would be a ridiculous use of technology to design—waste our money designing a vehicle to sense whether that particular vehicle is using B20 when you can look at the fleet records. Our goal, remember, is to displace foreign petroleum.

Mr. SPERLING. This technical impossibility can be done easily in light of——

Mr. SHIMKUS. The gentleman will suspend his time.

Ms. MCCARTHY. Mr. Chairman, I know I have utilized that 5 minutes allotted for questioning and there may be other questions from more senior members, and I would yield to you. Can you come back to me when it is appropriate for further questions?

Mr. SHIMKUS. I will, but I am not a more senior member. So it is my turn, if that is okay.

Mr. HALL. You are the chairman.

Mr. SHIMKUS. Mr. Gross, when you testified before the Senate in May, you told us, the Senators, that the Department would have a proposed rule completed and in a public domain for review within 4 weeks. Today, you said very soon. From your Senate testimony, it is now 8 weeks, which obviously is twice the time. Does the Department have a proposed rule that the committee could review?

Mr. GROSS. Well, I probably should get out of the business of forecasting how quickly we can get rules out. I mean, I am embarrassed about the fact I did not provide an accurate forecast in May; and I am embarrassed about that, that it is not out.

We believe that we arrived at the point of having all of the concurrences that are required. After many iterations of the proposed rule, that we will, within a few days, be sending it to the Office of Management and Budget for their sign-off and have it published in the Federal Register. But if I give you a number of days, I am probably going to be embarrassed again.

Mr. SHIMKUS. Is——

Mr. GROSS. If I might comment, I think, going back to others' testimony, the point was made that why didn't we just say no. We, in fact, could have done that a couple of years ago. We have been engaged in lots of discussion over time with the biodiesel industry supporters. And when it was clear that there was difficulty on our part in the context of the Energy Policy Act at arriving at an answer of yes for B20 as an alternative fuel, there was great resistance and lots of discussion on the part of the industry about the case to be made for our focusing more on the replacement fuels and finding an answer.

We got—we should have gone to the point of discussing the replacement fuel program at that point. And, in fact, I think it is safe to say that we really did want to engage on the subject of replacement fuels. What happened is we got ourselves bogged down in the rulemaking process and bogged down more than we would ever have imagined in terms of time.

Mr. SHIMKUS. We want you to get unbogged, I think is our desire, and that is why this legislation has been proposed.

Before the National Biodiesel Board filed a petition with the Department on September 10, 1996, was there another petition filed?

Mr. GROSS. There was not a formal petition filed before September, 1996, in my recollection. We were having discussions certainly before that point in time about actions that we could take.

Mr. SHIMKUS. Does anybody else want to comment?

Mr. Teall?

Mr. TEALL. There was a petition filed by Twin Rivers Technologies, which is a biodiesel out of Quincy, Massachusetts, in March 1995.

Mr. SHIMKUS. So if we included the petitions submitted by Twin Rivers Technologies, the Department has known about the biodiesel for nearly 3 years and not acted; is that correct?

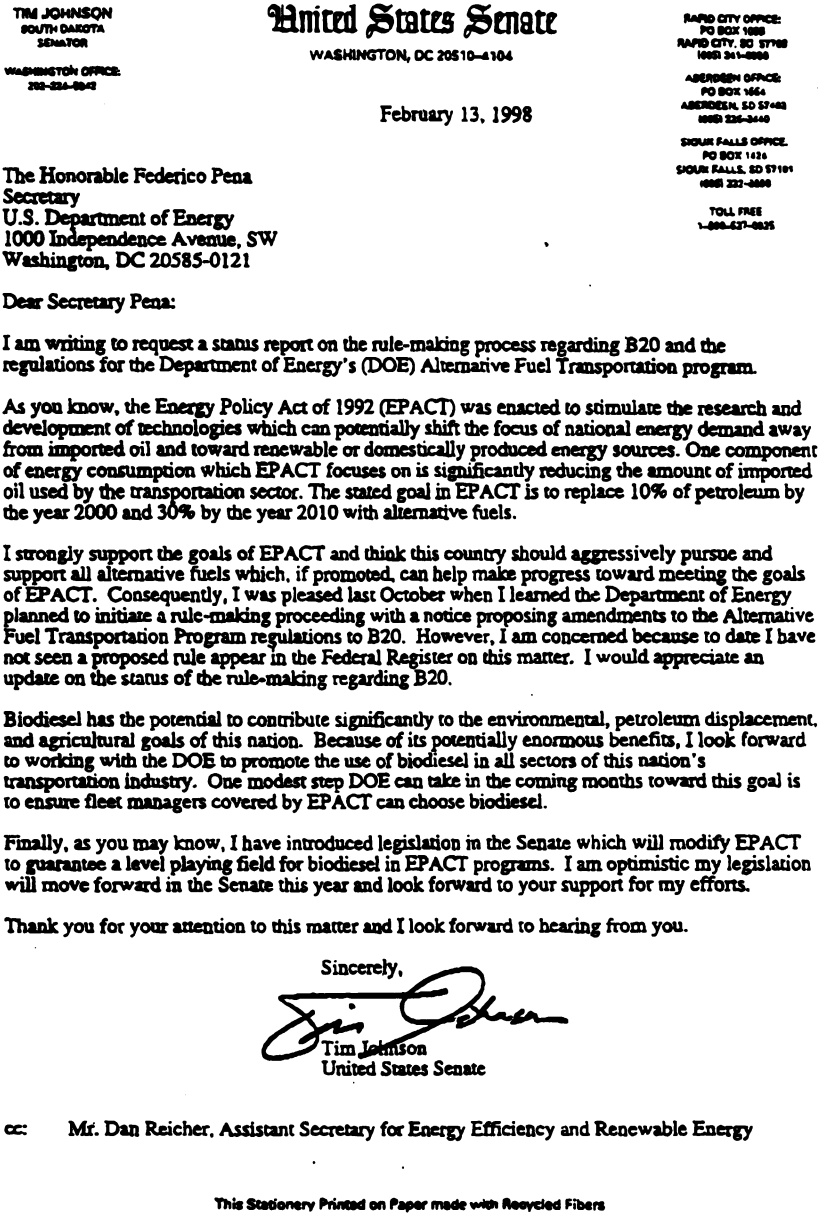
Mr. GROSS. I would like to point out that particular petition was withdrawn.

Mr. SHIMKUS. Was it—do you know when it was withdrawn? Was it withdrawn after the National Biodiesel Board submitted theirs?

Mr. GROSS. No, it was before.

Mr. SHIMKUS. I would like to—without objection, I would like to add to the record numerous copies of letters from Members of Congress to the Department's support of B20. It is interesting to note that the Members who have signed these letters include our own very ranking member John Dingell and the current Department of Energy nominee Bill Richardson. And, without objection, I would like to do that.

[The information referred to follows:]



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February 13, 1998

The Honorable Federico Pena
Secretary
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0121

Dear Secretary Pena:

I am writing to request a status report on the rule-making process regarding B20 and the regulations for the Department of Energy's (DOE) Alternative Fuel Transportation program.

As you know, the Energy Policy Act of 1992 (EPACT) was enacted to stimulate the research and development of technologies which can potentially shift the focus of national energy demand away from imported oil and toward renewable or domestically produced energy sources. One component of energy consumption which EPACT focuses on is significantly reducing the amount of imported oil used by the transportation sector. The stated goal in EPACT is to replace 10% of petroleum by the year 2000 and 30% by the year 2010 with alternative fuels.

I strongly support the goals of EPACT and think this country should aggressively pursue and support all alternative fuels which, if promoted, can help make progress toward meeting the goals of EPACT. Consequently, I was pleased last October when I learned the Department of Energy planned to initiate a rule-making proceeding with a notice proposing amendments to the Alternative Fuel Transportation Program regulations to B20. However, I am concerned because to date I have not seen a proposed rule appear in the Federal Register on this matter. I would appreciate an update on the status of the rule-making regarding B20.

Biodiesel has the potential to contribute significantly to the environmental, petroleum displacement, and agricultural goals of this nation. Because of its potentially enormous benefits, I look forward to working with the DOE to promote the use of biodiesel in all sectors of this nation's transportation industry. One modest step DOE can take in the coming months toward this goal is to ensure fleet managers covered by EPACT can choose biodiesel.

Finally, as you may know, I have introduced legislation in the Senate which will modify EPACT to guarantee a level playing field for biodiesel in EPACT programs. I am optimistic my legislation will move forward in the Senate this year and look forward to your support for my efforts.

Thank you for your attention to this matter and I look forward to hearing from you.

Sincerely,

Tim Johnson
United States Senate

cc: Mr. Dan Reicher, Assistant Secretary for Energy Efficiency and Renewable Energy

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United States Senate
WASHINGTON, DC 20510-2503

May 15, 1995

The Honorable Hazel R. O'Leary
Secretary
Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585

Dear Secretary O'Leary:

As co-chairs of the Congressional Soybean Caucus, we want to express our strong support for biodiesel and ask that specific biodiesel provisions be included in the final Alternative Fuel Transportation Program regulations currently under consideration pursuant to the Energy Policy Act of 1992 (EPACT).

As you know, one of the most important goals of EPACT is to reduce our nation's reliance on imported oil by promoting alternative fuels. Biodiesel can help achieve this goal. It can be burned in existing diesel engines with little or no modification, either in its pure form or blended with conventional diesel fuel. As a renewable fuel derived from agricultural feedstock, such as soybean and cottonseed oil, biodiesel benefits not just our balance of trade, national energy security, and access to more diverse sources of energy. Biodiesel also represents a critical economic opportunity for our rural economy which is struggling to find new uses for agricultural commodities and expand markets in an increasing competitive international environment.

Biodiesel can be easily manufactured in plants located in oilseed producing areas, creating a tight loop between production, processing, and utilization of agricultural products -- further increasing the benefit to rural America. Additionally, biodiesel is biodegradable and non-toxic and there is increasing scientific evidence that biodiesel and biodiesel/diesel blends provide promising reductions in the exhaust emissions of carbon monoxide, visible smoke, and various hydrocarbons when compared with conventional diesel fuel.

We understand that several specific suggestions have been advanced that would provide the adequate flexibility necessary to include this promising new technology into the final AFTP. These include recommendations that DoE recognize biodiesel as an alternative fuel under EPACT and that DoE allow biodiesel alternative fueled vehicles participate in this program without restrictions. To facilitate the increased use of biodiesel to help meet the goals of EPACT, the Clean Air Act, and to enhance farm income and rural development, we encourage DoE to strongly consider these revisions.

We appreciate your attention to this important matter and request that we be kept advised of progress on this issue.

Sincerely,

Paul Simon

Christopher S. Bond

Charles E. Grassley

Howell Heflin

Congreſs of the United States
Washington, DC 20515

June 1, 1995

The Honorable Hazel O'Leary
Secretary of Energy
Department of Energy
1000 Independence Ave. S.W.
Washington, D.C. 20585

Dear Secretary O'Leary:

We are writing to support the inclusion of biodiesel in the Alternative Fuel Transportation Program of the Energy Policy Act of 1992 (EPACT), which is currently under consideration by the Department of Energy (DOE).

Biodiesel is a renewable alternative fuel derived from agricultural feedstocks, such as soybeans. Biodiesel can be blended with petroleum diesel in any combination with little or no engine modification. It is distributed and stored using existing diesel infrastructure and offers improvements in exhaust emissions over petroleum diesel.

The characteristics of biodiesel make it an ideal option for complying with the proposed Alternative Fuel Transportation Program. However, before biodiesel can be utilized in this program, several provisions of the proposed regulations must be clarified or revised. First, DOE must officially recognize biodiesel as an alternative fuel under EPACT. Second, affected states and alternative fuel provider fleets must have the flexibility to utilize biodiesel in their alternative fuel vehicle programs.

Increased use of biodiesel as a result of this program can improve our environment, enhance our national energy security, generate rural economic development opportunities, and create a new and exciting market for domestically produced agricultural commodities. Therefore, we strongly encourage DOE to give favorable consideration to biodiesel as a viable option for meeting the goals of the Alternative Fuel Transportation Program.

Sincerely,

Rep. Richard Durbin

Doug Bereuter
Rep. Doug Bereuter

Rep. Jim Leach

Bill Emerson
Rep. Bill Emerson

Rep. Greg Ganske

Jim Nussle
Rep. Jim Nussle

Tom Latham
Rep. Tom Latham

Lane Evans
Rep. Lane Evans

Rep. Glenn Poshard

Rep. Sonny Montgomery

John Spratt
Rep. John Spratt

Rep. David Minge

Rep. Jerry Weller

Ron Lewis
Rep. Ron Lewis

Rep. Jerry Costello

Tom Ewing
Rep. Tom Ewing

Dave Camp
Rep. Dave Camp

Rep. John Tanner

Rep. Pat Danner

Blanche Lambert Lincoln
Rep. Blanche Lambert Lincoln

Congress of the United States
Washington, DC 20515

October 25, 1996

The Honorable Hazel R. O'Leary, Secretary
U.S. Department of Energy
Forrestal Building
1000 Independence Ave., S.W.
Washington, D.C. 20585

Dear Secretary O'Leary,

As members of the U.S. House of Representatives concerned with our nation's energy security, we would like to express our support for biodiesel, a renewable alternative fuel for diesel engines derived from vegetable oils, such as soybean oil. We believe the Department of Energy (DOE) should initiate a rulemaking to include B20, a 20% biodiesel/80% diesel fuel blend, as an alternative fuel under the Energy Policy Act of 1992 (EPACT). B20 is good for farmers, good for the environment, good for the economy and will contribute to national energy security. Including B20 as an alternative fuel would also be consistent with the legislative intent of EPACT.

Biodiesel has important environmental benefits. Biodiesel is registered with the EPA as a fuel and fuel additive. Scientific evidence demonstrates that using B20 reduces most harmful exhaust emissions from diesel engines. Biodiesel can also be processed from recycled cooking oils and waste animal fats.

Biodiesel promotes economic development and energy security. As a renewable fuel, biodiesel offers America's farmers stable, long-term markets for efficiently-produced soybean oil. Biodiesel also means jobs and tax revenues from processing a greater portion of our domestic soybean oil in the U.S. Use of domestic biodiesel improves national energy security by displacing imported energy.

Under current DOE regulations, 75% of affected federal and state government fleet vehicle purchases and 90% of affected fleet vehicle purchases by private alternative fuel suppliers must be alternative fueled vehicles by the year 2001. Future DOE EPACT regulations may extend similar vehicle purchase requirements to municipal and other large private company fleets.

Congress clearly intended that EPACT should be "fuel neutral". Fuel neutrality simply means there is no presumption in the law to favor any particular alternative fuels as a means of compliance with the goals of EPACT. Congress made EPACT fuel neutral to give regulated fleets the flexibility to decide which alternative fuels are compatible with their operations. B20, therefore, will give regulated fleets greater flexibility to comply with EPACT.

B20 is the most popular biodiesel blend tested so far with diesel consumers and engine manufacturers. B20 provides many of the environmental and safety benefits of pure biodiesel at a fraction of the cost. B20 is also compatible with existing diesel engine maintenance and refueling facilities. More than 10 million miles of in-service pilot programs have been conducted across the nation using B20. For these reasons, B20 should be a popular EPACT compliance option for regulated fleets that use diesel vehicles.

Before B20 can be included as an EPACT alternative fuel, the DOE must amend its current regulations. The American Soybean Association and other supporters of B20 have recently submitted a petition to the DOE to initiate a B20 rulemaking. Initiating a rulemaking will allow the DOE to collect data on B20 and to render a reasoned decision. Once all of the data on the benefits of B20 is placed in the public record, we are confident that you will decide to include B20 as an alternative fuel. Therefore, we urge you to immediately initiate a rulemaking to amend existing DOE regulations to include B20 as an EPACT alternative fuel.

The recent re-escalation of conflict in the Middle East has again highlighted our nation's dependence on imported energy. Including B20 as an EPACT alternative fuel will allow domestically produced biodiesel to immediately play a role in reducing that dependence. It will also benefit the environment, our farmers, and our economy, as well as assist regulated fleets to comply with EPACT.

We appreciate your active interest in expanding the role of renewable fuels in U.S. energy policy. Please keep us apprised of your progress on this important matter.

Sincerely,

Tom Latham

Johnson

Jerry Costello

Jim Bunning

Doug Bereuter

Jan Meyers

John D Dingell

Lane Evans

Glenn Poshard

Bill Richardson

Ed Bryant

Nick Smith

John Spratt

Ed Whitfield

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Minge

Tim Hutchinson

Jim Lightfoot

Collin C Peterson

Chas. T. Canady

David Funderburk

Ron Lewis

Walter B. Jones, Jr.

Joe Moakley

Roger Wicker

Dave Camp

Jim Nussle

Saxby Chambliss

Greg Ganske

Eva M. Clayton

United States Senate
WASHINGTON, DC 20510

October 24, 1996

The Honorable Hazel R. O'Leary, Secretary
U.S. Department of Energy
Forrestal Building
1000 Independence Ave., S.W.
Washington, D.C. 20585

Dear Secretary O'Leary,

As members of the U.S. Senate concerned with our nation's energy security, we would like to express our support for biodiesel, a renewable alternative fuel for diesel engines derived from vegetable oils, such as soybean oil. We believe the Department of Energy (DOE) should initiate a rulemaking to include B20, a 20% biodiesel/80% diesel fuel blend, as an alternative fuel under the Energy Policy Act of 1992 (EPACT). B20 is good for farmers, good for the environment, good for the economy and will contribute to national energy security. Including B20 as an alternative fuel would also be consistent with the legislative intent of EPACT.

Biodiesel has important environmental benefits. Biodiesel is registered with the Environmental Protection Agency as a fuel and fuel additive. Scientific evidence demonstrates that using B20 reduces most harmful exhaust emissions from diesel engines. Biodiesel can also be processed from spent cooking oils and waste animal fats.

Biodiesel promotes economic development and energy security. As a renewable fuel, biodiesel offers America's farmers stable, long-term markets for efficiently-produced soybean oil. Biodiesel also mean jobs and tax revenues from processing a greater portion of our domestic soybean oil in the U.S. Use of domestic biodiesel improves national energy security by displacing imported energy.

Under current DOE regulations, 75% of affected Federal and state government fleet vehicle purchases and 90% of all affected fleet vehicle purchases by private alternative fuel suppliers must be alternative fueled vehicles, by the year 2001. Future DOE EPACT regulations may extend similar vehicle purchase requirements to municipal and other large private company fleets.

Congress clearly intended that EPACT should be "fuel neutral." Fuel neutrality simply means there is no presumption in the law to favor any alternative fuels as a means of compliance with the goals of EPACT. Congress made EPACT fuel neutral to give regulated fleets the flexibility to decide which alternative fuels are compatible with their operations. B20, therefore, will give regulated fleets greater flexibility to comply with EPACT.

B20 is the most popular biodiesel blend tested so far with diesel consumers and engine manufacturers. B20 provides many of the environmental and safety benefits of pure biodiesel at a fraction of the cost. B20 is also compatible with existing diesel engine maintenance and refueling facilities. More than 10 million miles of in-service pilot programs have been conducted across the nation using B20. For these reasons, B20 should be a popular EPACT compliance option for regulated fleets that use diesel vehicles.

Before B20 can be included as an EPACT alternative fuel, the DOE must amend its current regulations. The American Soybean Association and other supporters of B20 have recently submitted a petition to DOE to initiate a B20 rulemaking. Initiating a rulemaking will allow the DOE to collect data on B20 and to render a reasoned decision. Once all of the data on the benefits of B20 is placed in the public record, we are confident that you will decide to include B20 as an alternative fuel. Therefore, we urge you to immediately initiate a rulemaking to amend existing DOE regulations to include B20 as an EPACT alternative fuel.

The recent re-escalation of conflict in the Middle East has again highlighted our nation's dependence on imported energy. Including B20 as an EPACT alternative fuel will allow domestically produced biodiesel to immediately play a role in reducing that dependence. It will also benefit the environment, our farmers, and our economy, as well as assist regulated fleets to comply with EPACT.

We appreciate your active interest in expanding the role of renewable fuels in U.S. energy policy. Please keep us apprised of your progress on this important issue.

Sincerely,

Chuck Grassley

Tom Harkin

Ted Kennedy

Carl Levin

Daniel Inouye

Dale Bumpers

Connie Mack

Bill Frist

Paul D. Wellstone

Kit Bond

Mitch McConnell

Larry Pressler

Paul Simon

Mr. SHIMKUS. Mr. Gross, in title 3 of EPACT, we find the definition of alternative fuels and the authority of the Department to add fuels to lists. We have gone over that with a couple of questions, I know, by Mr. Rogan. Under EPACT in year 2000, we are supposed to have 10 percent displacement; is that correct?

Mr. GROSS. Ten percent displacement of light-duty vehicle motor fuels, that is correct.

Mr. SHIMKUS. 2010——

Mr. GROSS. That is the goal.

Mr. SHIMKUS. 2010, 30 percent.

Mr. GROSS. That is correct.

Mr. SHIMKUS. Is that substantial?

Mr. GROSS. That is very substantial. Certainly that is a very lofty goal. And I would say that the tools which we have available are modest with which to, in fact, accomplish that goal.

Mr. SHIMKUS. And maybe—the Department I know is consumed with trying to get this rule out, and it may not have the time to answer this question, but if every diesel engine ran on B20, would we be able to meet the goals of the EPACT?

And if you could have your theorists and economists and your prognosticators come back with that question, I would think that the debate we are having here is really the definition of substantial. We are going to get involved with the issue of dedicated vehicles and two-tank vehicles versus one-tank vehicle.

[The following was received for the record:]

The Energy Information Administration estimates that in 1998 more than 153 billion gallons of petroleum fuel will be consumed in the transportation sector of the United States, of which approximately 31.8 billion gallons are diesel fuel. If all diesel vehicles were converted to operate on B20, approximately 6.4 billion gallons of diesel fuel would be displaced, which would account for 4.2 percent of the country's total fuel use. This petroleum displacement, combined with the estimated displacement of 3.2 percent through the use of oxygenates and alternative fuels, would result in a total displacement of 7.4 percent, which is short of the Energy Policy Act of 1992 goal of 10 percent displacement in 2000 and far short of the 30 percent goal in 2010. If fewer than 100 percent of all diesel vehicles were to use B20, the total displacement of petroleum fuels would be even lower.

Mr. SHIMKUS. I think it is interesting to note that your position on going to a fuels policy is critical. Going to a dedicated vehicle policy does not assume any natural gas usage and credit. If they have a bi-fueled vehicle and they run that on petroleum fuel, they are getting credit because they have a bifuel vehicle. I think that speaks to the argument of going to a fuels issue.

And then what I will do then is turn to the ranking member of the subcommittee, Mr. Hall, for a series of questions.

Mr. GROSS. If I might respond, Mr. Chairman, to the issue on if all diesel vehicles used B20. We will get the specific numbers for you. I believe the answer to that is no. But I would point out that if all covered fleet vehicles that use—that are diesel fueled were to use B20, that would contribute less than 1 percent of the desired displacement. Those are EPACT covered fleet vehicles.

Mr. SHIMKUS. Okay. Thank you.

Mr. Hall?

Mr. HALL. Mr. Chairman, thank you.

I would like to get into what Mr. Sperling and Mr. Teall were about to arm wrestle about before you separated them and sent them back to their corners. I leave that, though, to Mrs. McCarthy, because I think she probably wants to get into that with them.

I will go to Mr. Campbell. You seem so practical that you probably ought to step up here on the panel with us.

You have representatives of, what, the Department of Energy and General Counsel for the Natural Gas Vehicle Coalition and others. I would like to give you the opportunity, Mr. Campbell, to give us your perspective on how the Department of Energy or any other relevant Federal agency, how they have approached the biodiesel issues and, additionally, whether or not you have been able to work with the traditional—and I use that word lightly—environmental groups, subject to the Sierra Club or the Natural Resources Defense Council, the Union of Concerned Scientists, on issues that are before us today. What roadblocks or what assistance have you received from those folks?

Mr. CAMPBELL. Well, I will tackle the environmental—did you say the main line environmental groups, I think? I don't remember the term you used.

Mr. HALL. I have got a lot of different definitions for them. I said traditionals.

You know, I always make the dirty dozen with 11 Republicans. And they left me off one time, and I called them up and I said, you put me back on there. Are you trying to get me beat in my district? Whatever they call them, I am sure they have a place and a valuable service.

Mr. CAMPBELL. We have been very disappointed in our ability to persuade these environmental groups of the virtues in renewable, nontoxic, biodegradable, greenhouse-gas-reducing fuels. And not to speak for them, but our view of where they are coming from is that they don't like diesel, and that they——

Mr. HALL. They like natural gas, don't they?

Mr. CAMPBELL. And they don't want anything that would help diesel. Unfortunately, they don't recognize that diesel is, on average, 1/3 more efficient than gasoline and that, for the foreseeable future, petroleum-derived fuels are going to be our base stock for this country. They have to be. Alternatives simply can't provide the volume at the costs required for this country to keep rolling.

So we view ourselves as an option to help clean up diesel and to displace our dependence on foreign oil. They don't see it that way. They see us probably as something that is going to keep a technology on the road that they don't like.

With respect to DOE and the rulemaking process, sir, there is no reason why a rule takes that long. They have struggled with it, that is true, but primarily I think that their conflict has been an unwillingness or an inability to view themselves as having the authority to do the things that would make us a viable fuel under this program. And so, therefore, we have asked Congress to help clarify those issues for them.

And it is kind of a game of chicken. Well, go get the legislation, and we will see what we can do. But then, when the legislation comes, don't do that. We will do it through the rulemaking.

Well, getting a proposed rule, you could be years before you get a final rule. And then you have this game of chicken going on between the Congress and the agency on what is ultimately going to come out.

I don't want to be critical of the people that have worked on this, because they have struggled with it, and there is a lot of conflicting interests here. But the idea that you can't tamper with a piece of legislation that isn't working seems ironic.

They say this legislation isn't working because vehicle sales don't translate to fuel use and the object of the legislation is fuel use. So if we want to go outside the box and talk about a replacement fuel program, that is much, much bigger than biodiesel. We are just a tiny piece of that.

So within the box of EPACT, can we construct a program that gets some fuel used as a primary objective and also get some vehicles out that are biodiesel vehicles in the heavy-duty and medium-duty category? We think that is doable.

Mr. **HALL**. I think my time is up. I will come back, Mr. Sperling, to you. Thank you.

Mr. Chairman, I yield back whatever time I have.

Mr. **SHIMKUS**. You have none.

Mr. **HALL**. Thank you. I yield every bit of it back.

Mr. **SHIMKUS**. I would like now to turn to my colleague from Oklahoma, Mr. Largent.

Mr. **LARGENT**. Mr. Gay, how many acres do you farm?

Mr. **GAY**. Thirteen thousand crop acres plus about 700 pasture.

Mr. **LARGENT**. Have you ever used that round-up ready soybean?

Mr. **GAY**. Yes, sir.

Mr. **LARGENT**. Is it any good?

Mr. **GAY**. Yes, sir.

Mr. **LARGENT**. Mr. Campbell, you said something in your testimony, you talked about, is it alternative-fuel vehicles, AFVs, that are not burning alternative fuels? What do you mean by that?

Mr. **CAMPBELL**. Probably 90 percent of the vehicles that are purchased or converted to comply with EPACT don't burn the fuel. In other words, let's take E85 ethanol vehicles as an example. Now, our cooperative—and I emphasize cooperative because we are a farmer-based organization—has an ethanol plant. We are 100 percent, 190 percent behind ethanol. And we watch the E85 vehicles rolling off and satisfying the requirements of EPACT, but no one fills up with the E85, because there isn't any available, and if it was, it would be higher priced.

The same thing is true with bifuel, dual-fuel natural gas vehicles that have a natural gas tank and the gasoline tank. Nobody says you have to use the natural gas, and they don't.

This program is a failure from the point of view of displacing alternative fuels. It is a success from the point of view of getting alternative-fuel vehicles out there, whatever the definition of those might be, but they don't use the fuel.

Mr. **LARGENT**. Okay. Mr. Gross, are there any consequences for not complying with the EPA act in terms of the numbers that were supposed to be hit at? Was it 2000, 2010?

Mr. **GROSS**. There are no consequences with respect to those particular goals. There are—in the covered fleets, there are potential consequences for fleet managers who do not acquire the required percentage of alternative-fuel vehicles.

I would like to take this opportunity to point out that we certainly agree, and I tried to make that clear in my testimony, that the focus being on acquisition of vehicles as opposed to acquisition of fuels is flawed and does need to be remedied, if we are going to have a serious program to get displacement of petroleum. I believe we all probably agree at this table on that issue.

Mr. LARGENT. Is the Department of Energy's problem with the B20 formula this whole issue of what is substantially petroleum product? I mean, because you guys have already said the neat form of biodiesel is substantially not petroleum, it is 100 percent not petroleum.

Mr. GROSS. That is correct.

Mr. LARGENT. So the question is 20 percent, is 30 percent, is that kind of the issue?

Mr. GROSS. A lot of the legal issue hinges on the substantial nonpetroleum provision in the Energy Policy Act. So that is something that has taken a lot of effort to try to address.

There is a lot of times some confusion, I think, with respect to that definition of substantial in terms of the fuel, the portion of a gallon of fuel, which is nonpetroleum, as opposed to 10 percent and 30 percent being substantial in the context of total displacement of light-duty motor fuels. Those should be discussed separately and not in conjunction. It is apples and oranges. So I would like to make that point as well.

With respect to dual-fuel vehicles under the Energy Policy Act, our best estimate is that about 70 percent of the acquisitions are dual-fuel vehicles. Thirty percent are dedicated at this point in time.

Mr. LARGENT. Let me ask you another question. This is a curiosity question. I was told by somebody at one time, and I know this was probably more appropriately addressed to the EPA but I think you might know the answer, that a diesel bus, city of Tulsa diesel bus really has a lot less regulation on its emissions than my automobile does. Is that true?

And I would also like you to answer the question, what is the effect on the air quality as a result of the diesel emissions compared to an automobile or a gas engine?

Mr. GROSS. Well, the emissions requirements are less stringent with respect to grams per mile or grams per brake horsepower hour for heavy vehicles than they are for your car.

Mr. LARGENT. Because they are supposedly are carrying more people, is that why? Or——

Mr. GROSS. I don't think that is why. There is an issue of the technological capability to achieve lower emissions.

If you put it in terms of passenger miles, if you have got a full bus, you are probably making out well in terms of total emissions.

Mr. LARGENT. But if you are driving a dump truck?

Mr. GROSS. If we got a dump truck, I think we know what the answer to that is. That is a big issue with the upcoming EPA rules, that they are considering how to treat heavier vehicles vis-a-vis lighter. It is of great interest to us as well as we look at advanced technology and fuel economy and the ability to get increased fuel economy. Probably the question——

Mr. LARGENT. Well, you have answered my question. Because what I wanted to know is, in fact, are heavy trucks, buses less regulated currently in terms of the emissions standards that they have to meet.

Mr. Gay, do you have any background information or thoughts you would like to give us on B20 emissions as compared to diesel?

Mr. GAY. Well, we have done a great deal of work with that. I think the most conclusive is a tier 1 of the health effects testing with EPA which we have now completed, and we can submit that to you.

But I guess, suffice it to say at this point, that the regulated emissions are all reduced and total smog-producing emissions are reduced and many potentially cancer-causing but unregulated emissions were reduced from 75 to 99 percent. So there is an extremely clean and environmentally friendly fuel.

Mr. LARGENT. Would the cost be competitive with straight diesel at the pump right now?

Mr. GAY. No, it would not.

Mr. LARGENT. How much would it add?

Mr. GAY. At B20, I think it would add about 30 cents at this time.

Mr. LARGENT. And what would a bushel of soybeans go up?

Mr. GAY. Well, USDA I think has figured that out in one of their incomprehensible formulas that I don't understand. But about 7 cents a bushel, which one of the staff people here just handed me this note, said my farm would produce 93,000 gallons of biodiesel a year. That would be a nice little income enhancement, I would think, for me.

Mr. LARGENT. I farm 270 acres of soybeans myself, so I have an interest in that as well. All right, thank you.

Mr. SHIMKUS. Thank you.

And I would like to turn to another cosponsor, the gentleman from Maryland, Mr. Wynn, for a round of questions.

Mr. WYNN. Thank you, Mr. Chairman.

As you know, the recent Senate action indicated strong support for the goals of this legislation, and I am very pleased with that. If in fact this becomes law, does the Department of Energy believe it would be necessary to add some fuel use reporting in conjunction with a statement I believe by Mr. Campbell that people are not in fact using it by having the vehicles designed to use it? Is that going to be a necessary component of enforcement?

Mr. GROSS. Certainly, if the law passes, we believe it would be very important to institute a fuel-use reporting requirement. As a matter of fact, one of the things that we believe we ought to be discussing is, whether it passes or not, whether we should have a fuel-use reporting requirement and, again, consistent with getting more focus on fuel use as opposed to vehicles acquired.

Mr. WYNN. Okay. How would it work?

Mr. GROSS. Well, I don't know that we have worked out all the details. We do know the covered fleets. We know how to get in contact with them. We would put together some sort of a system identifying the total amount of fuel used, probably have to be vehicle aggregated. We would have to work on some system with the covered fleets, the State and alternative-fuel providers, to arrive at a process that hopefully is not too all-consuming but provides the basic information between what types of fuels are used in the vehicles and to what—and in what amounts.

Mr. WYNN. Mr. Campbell, I believe—was it your testimony that no one is using this or—buying the vehicles but they are not using? What are your thoughts on the monitoring of fuel use and what type of apparatus approach would have to be implemented to make this work?

Mr. CAMPBELL. Well, monitoring is not difficult, because I believe there is some kind of a report already in law for certain fleets. Yes, there is an annual report, thank you. So I don't think that the report is the focus. I think use is the issue.

Mr. WYNN. Is that pretty much a cost issue?

Mr. CAMPBELL. Use?

Mr. WYNN. Yes.

Mr. CAMPBELL. Yes, it is.

Mr. WYNN. Can someone comment on why we are having this, I don't want to say cost problem, but what—it appears to be a significant cost consideration? Based on your testimony, Mr. Campbell, it is more expensive to use this. What do we need to do to bring the cost down?

Mr. SPERLING. I would love to comment on that, because that is the issue that joins all of us together, including the B20 biodiesel industries with the natural gas vehicle industry, methanol, propane and ethanol. We have a virtual monopoly in transportation for diesel and gasoline. There is a corner fueling station everywhere. Vehicles have been built by original equipment manufacturers. Everything is gasoline or diesel.

We in the natural gas industry—natural gas vehicle industry have tried to crack that in part by converting existing gasoline vehicles. So the mention today of there is 76 percent fuel storage capability for gasoline, 24 for natural gas, well, that is because there is a gas tank on the car and you are converting a vehicle and it is not the right way to do it. The problem is cost.

Natural gas vehicles' biodiesel fuel, methanol, ethanol, are not mass produced for the transportation market. You do not have economies of scale. There are substantial research and development investment costs that are allocated to a relatively small amount of sales, so you are increasing the per unit costs without stimulating initial demand to get to levels where it will justify the investment in fueling infrastructure and mass production. You are going to have a cost problem.

The only fuel of these fuels that costs less than the competing fuels is natural gas. So there is an economic incentive to use it, but there is a high capital cost in the vehicle.

We need—what this legislation was intended by mandating fleets to use the vehicle, to create some demand, it doesn't work. It doesn't require the fuel. So it is not going to get to it. We need another approach. That is what we should be looking at, not this type of legislation.

Mr. WYNN. Can I have another minute?

Mr. SHIMKUS. Without objection.

If I may first, the gentleman from Maryland. Under our bill, it would require the Secretary to have the authority to review fuel usage. So part of the bill is focused on that very, I think, as what you see, a need.

Mr. WYNN. Absolutely.

Just a quick follow-up. There is some suggestion just about every vehicle could use the B20 biodiesel. Is that true?

Mr. TEALL. What we have seen is that the only modifications that are needed tend to be in older vehicles. If the fuel lines were made from natural rubber, for instance, it is a $2 or $3 swap-out for a fuel line. It isn't a major thing.

But when the diesel engine was invented by Dr. Rudolph Diesel and exhibited at the Paris World Fair, it ran on peanut oil. So the diesel engine was originally designed to run on vegetable oils, and it is only because of the petroleum availability that we started using diesel. So any diesel engine is inherently capable of using biodiesel, with very little modification, if any.

Mr. WYNN. And, finally, just in light of the problems with conversion with other alternative fuels as opposed to the efficiency that we could get with biodiesel, what would be—wouldn't it be more cost effective to look at this from a clear air standpoint as a wise investment?

Mr. SPERLING. At a cost of 30 to 40 cents more per gallon than diesel, I don't think most fleets would agree with that.

The problem here is getting that cost down. You have to increase the use and the demand for it to get the costs down. We submit that, because EPACT requires a vehicle only to be capable of operating on fuel, no one will use B20 because it costs too much. So this is not a viable option.

Mr. TEALL. To answer——

Mr. WYNN. But air would be cleaner if it were used, would it not?

Mr. SPERLING. If people used propane natural gas electricity, hydrogen, biodiesel, we wouldn't have a nonattainment problem. We wouldn't have a clean air problem. The problem is getting people to use it.

Mr. TEALL. To answer your question on a life-cycle analysis, the U.S. Department of Agriculture has done a study comparing the alternative fuels, and they look at capital acquisition costs, which are higher for some alternative fuels, with cheaper fuel, once you are implemented, and then using existing vehicle and running it on biodiesel, which is more expensive.

And at B20, it is very cost effective for a bus or an urban transit district to use biodiesel in terms of a life-cycle analysis.

The second stage of that analysis is a cost per ton. If you can run 10 buses on B20 versus one bus on natural gas, your net impact on the environment, your cost per ton of reductions is going to be much less per biodiesel.

So in an age where you have limited budgets and you are trying to get the biggest bang for the buck, the question becomes, do you totally replace the existing transportation infrastructure or do you use a cleaner fuel that might be a little more expensive but be able to be widely implemented?

Mr. WYNN. Mr. Gay?

Mr. GAY. I think any fleet, particularly those in urban nonattainment areas, has more than one program or regulatory requirement with which to comply; and no one is going to set out in a program which doesn't meet their overall requirements. It is not just alternative-fuel vehicles. There is also various clean air requirements that they may have to deal with. And so when we start to focus too closely or too narrowly on just one program, we miss the point.

We need a B20 biodiesel vehicle to qualify under the alternative vehicle program in EPACT so that people who also have requirements for clean air can use this in the fleets. So it would meet—in other words, it would meet the various requirements, and that is why this needs to be done.

Mr. WYNN. Mr. Gross?

Mr. GROSS. Since there has been some discussion about the relative costs, there is some success story to be mentioned with respect to transit buses in use of alternative fuels. Our information is that about 20 percent of the transit buses being ordered at the current time are natural gas fueled.

Mr. WYNN. Okay.

Mr. SPERLING. Mr. Wynn, the reason for that is that, over the life cycle of the bus, because natural gas costs less than diesel, the first cost, the incremental cost, is required. There is no recovery with a fuel that costs more than the other fuels. That simply gets to the issue of under the Clean Air Act most—for the first part, there are no requirements in the Clean Air Act that any fleets use alternative fuels.

There is a requirement that certain fleets in six cities in the country begin to phase in this fall the use of cleaner fuels, which includes cleaner diesel and cleaner reformulated gasoline. That is a very limited requirement. So the Clean Air Act really isn't a driver that is going to compel the fuel use.

Again, I would submit that the issue that we really need to look at is how do we get vehicles to operate on all of our fuels. And that is what—that is the direction we mean to take.

This legislation would remove the impetus for this because it would let everyone comply with EPACT without doing anything. So there is no incentive for movement, for them to look at anything or do anything more.

Mr. SHIMKUS. I would like to move on. There is a couple—I want to continue this debate. I would just like to respond to the comment made that the Clean Air Act is a mover and otherwise we wouldn't have the displacement that we have today. And also our bill does provide incentives. I mean, we want to be proactive, we want to encourage, and that is the intent.

But I want to move back to the substantial disagreement I have with Mr. Gross on substantial. I ran across the 1996 rulemaking which implements EPACT's alternative-fuel programs, and in that rule, DOE decided that producers who receive 30 percent of their income from production of an alternative fuel had to start buying alternative-fuel vehicles because 30 percent was considered substantial. So now we see 30 percent crop up twice.

Why then do you maintain that substantial for defining alternative fuels is that at least 60 percent or even higher? The Department seems to be arbitrarily defining the word substantial, wouldn't you agree?

Mr. GROSS. One of the problems with the word substantial is that it can be used in a variety of contexts. The point has been made, not at this hearing, but I believe Mr. Teall made it at the previous hearing, that half of a percent of arsenic in your drinking water is very substantial. And you wouldn't want to drink it if it had even that level.

Each of these definitions, the one you mentioned, Mr. Chairman, in the context of the rulemaking covering alternative-fuel providers, was arrived at again in a very rigorous time-consuming way, getting a lot of inputs, taking into account the size of the alternative-fuel providers, lots of other factors to come up with what the level is which would have—which would result in a reasonable alternative-fuel provider coverage.

Mr. SHIMKUS. If I may, that is what we are encouraging you to do, is to look at all of the various other factors.

Mr. Gay?

Mr. GAY. When we start talking about what is substantial, I begin to wonder. Because I think if we were all to go out in the country and we are going to explain this to the first five people that come down the sidewalk or down the road and you are going to explain if you take two tanks and put biodiesel in one and petroleum in the other and we wire them together and feed them into a fuel system, we have a substantial use of nonpetroleum. But if we dump them all in one tank and blame them, we don't.

But I think then the person or the conversation starts to break down, and the person shakes his head and walks off.

The biodiesel would be a substantial contribution to reducing petroleum. And to get into this thing about do that, we keep deteriorating into is just something that is—you couldn't have that discussion anywhere else.

Mr. SHIMKUS. Let me ask this question, because it is something that I hadn't thought of. If we were taking these bifuel vehicles, which we have now—and I have listings that I would like to submit for the record, without objection—and we had a vehicle that had two tanks, one tank being neat diesel, the other one being petroleum diesel, and we used the splash technique, would that qualify?

Comments?

Let me move on.

Mr. SPERLING. Probably not, unfortunately.

Mr. SHIMKUS. But you understand the question.

Mr. GROSS. There is a logical consistency there, but we probably have to go through a rulemaking.

Mr. SHIMKUS. No, no. I don't think we can wait that long.

While I am following with Mr. Campbell, real quick, on the—this all ties together, if I can tie it together in my mind.

I have driven a flexible fuel vehicle in my district, E85 ethanol vehicle; and I will concur with the comments here today that just because you are driving around a flexible fuel vehicle, you are not using flexible fuels, because of the availability of the fuels.

You can go to one intersection—I want to put 10 percent ethanol, which is kind of standard in the area. I might have to drive—if there is four corners on the intersection, I might have to get to the four stations sometimes to do that. Which brings me to the question for Mr. Sperling. If we are going to change America to burn natural gas, what is the capital investment needed to have the facilities in place to have a natural gas environment? What would be the costs to our Nation to have facilities that would burn petroleum natural gas?

Mr. SPERLING. I can provide the numbers in terms of estimates and various studies, but the costs would be far less than the continued costs of hundreds of millions of Americans live in nonattainment status and the cost of having associated with it——

Mr. SHIMKUS. I think, if I may reclaim my time, I would respectfully disagree. We are talking probably about billions of dollars to retool this entire country and to avail—to meet some standards.

Mr. SPERLING. Mr. Shimkus?

Mr. SHIMKUS. I would reclaim my time, and I want to go forward to Mr. Campbell—or, Mr. Teall, in your written testimony, you stated that, according to DOE's own Alternative-Fuel Vehicle Product Offering Guide, CNG is only 20 percent of the total onboard fuel storage facility in the GMC Sierra's bifuel truck. You go on to state that the Volvo 850 only has an onboard storage capacity of 19 percent. It sounds like these vehicles have blend levels as well as B20 and they are already in the program.

Why are they allowed in, while B20's are kept out? How do you know that these vehicles are the norm and not the exception?

And with the subcommittee's permission, I would like to submit for the record copies of data on bifuel vehicles that are already in the program. This information is from the Department's publication titled U.S. DOE Alternative-Fuel Vehicle Product Offering Guide.

[The information referred to follows:]

U.S. Department of Energy Alternative Fuel Vehicle Product Offering Guide

Model	Model Year Availability	Fuel	Type	Emission Class	Powertrain	Fuel Capacity	Range
CHRYSLER							
EPIC	MY 1997 (limited)	Electric Lead Acid	Minivan	ZEV	AC Induction Motor	324 volts	60 MI
Minivan	MY 1998	Ethanol	Minivan	N/A	V-6	N/A	N/A
FORD							
Ranger	MY 1997 MY 1998	Electric Lead Acid	LD Truck	ZEV	AC Induction Motor	26 kWh 312 volts	55 MI
Contour * (QVM)	MY 1997 MY 1998	CNG Bi-Fuel	Compact Sedan	Gasoline Equivalent	2.0-L I-4	4.2 GGE 14.5 gallons	CNG: 100 MI
Crown Victoria	MY 1997 MY 1998	CNG Dedicated	Full Size Sedan	ULEV	4.6-L V8	10 GGE 22¢	200 MI
Econoline	MY 1997 MY 1998	CNG/LPG Dedicated or Bi-fuel	Full Size Van	Various	5.4-L V8	Various Options	Various Options
F-Series	MY 1997 MY 1998	CNG/LPG Dedicated or Bi-Fuel	LD Truck	Various	5.4-L V8	Various Options	Various Options
Taurus	MY 1997 MY 1998	E-85 or M-85 Gasoline	Mid-Size Sedan	TLEV	3.0-L V6	18 Gallons	E-85: 230 MI M85:185 MI
GENERAL MOTORS							
EV1	MY 1997 MY 1998	Electric Lead Acid	Sedan Two-Seater	ZEV	AC Induction Motor	102kW	70 MI city 90 MI hwy
Chevrolet S-10	MY 1997 MY 1998	Electric Lead Acid	LD Truck	California Certified ZEV	AC Induction Motor	85 kW	40-45 MI
GMC Sierra * 2500	MY 1997 MY 1998	CNG Bi-Fuel	MD Truck	LEV	5.7-L Vortec V8	13.2 GGE 34 gallons 28¢	N/A
HONDA							
Honda EV Plus	MY 1997	Electric- NiMH batteries	Sedan	ZEV	49 kW DC motor	N/A	125 MI (FUDS)
Civic GX	MY 1998	CNG Dedicated	Compact Sedan	ULEV California ILEV Federal	1.6-L I-4	8.6-9.6 GGE (depends on tank pressure)	260-290 MI (range to to empty)
MAZDA							
Miata MX-5	MY N/A	Electric NiCd	Sedan Two-Seater	ZEV	DC Motor	N/A	112 MI
Titan	MY N/A	CNG Dedicated	Light-Duty Pickup	Gasoline Equivalent	4.0 L I-6	N/A	205 MI
626 Wagon	MY N/A	Hydrogen	Midsize Wagon	ULEV	139 rotary	N/A	N/A
NISSAN							
Altra EV	MY 1998	Electric- Lithium-ion Batteries	Minivan	ZEV	DC motor 83hp/62kW	345 kWh	120 MI
TOYOTA							
RAV4-EV	MY 1998-US	Electric- Lithium Acid/NiMH	Sports Utility Vehicle	ZEV	AC motor	45 kWh	106-120 MI
VOLVO							
Volvo 850 *	MY 1996 Experimental	CNG/ Gasoline Bi-Fuel	Station Wagon	ULEV	2.5-L 19¢→	4.5 GGE 19.3 gallons	CNG: 150 MI gasoline 350 MI

Mr. SHIMKUS. And really, Mr. Teall, if you would——

Mr. TEALL. Well, the information on the last year where it was fully available, I guess it was 1996, is from the Energy Information Administration Alternatives to Traditional Transportation Fuels 1996; and it shows 77 percent of the CNG vehicles being bi-fueled vehicles. So that is what the numbers say.

The reason for that is anecdotal. In talking with some of the State fleet operators in Louisiana, for instance, they tried natural gas in some of their medium- and heavy-duty vehicles, and because of the lack of infrastructure, these vehicles would have to go all over the State, just couldn't make it. By the time they went 50 miles to a refueling station and came back, it was time for them to fuel up again. They just can't get the range and capabilities that you can out of a traditional liquid diesel fuel.

So for medium- and heavy-duty vehicles for a lot of these State fleets, that biodiesel is the reasonable alternative, because the infrastructure is already there. We can use not only the existing vehicles but the existing tanks, the existing pumps, the existing mechanics, the existing maintenance repair shops.

When you are looking at changing the transportation infrastructure in the United States. It is more than just the vehicles. It is everything that goes with those vehicles. So if that helps any.

Mr. SPERLING. Mr. Chairman, if I can be allowed, because this seems to be degenerating into an attack on natural gas or natural gas biodiesel. That is the wrong way to look at this.

Mr. SHIMKUS. I agree.

Mr. SPERLING. The fact that a fuel storage on a vehicle—77 percent gasoline in a bifuel vehicle doesn't mean anything. Bifuel vehicles——

Mr. SHIMKUS. If I may, doesn't it mean that there is not the needed infrastructure to meet the demands of natural gas?

Mr. SPERLING. I agree that additional infrastructure is absolutely needed, and if there is an economic incentive, it will be there. But the truth is, there are many bifuel fleets that operate 100 percent of the time on natural gas, because natural gas costs less than gasoline, so there is an economic incentive to do.

Where there is a limitation is where the vehicle's driving range and driving need goes beyond the infrastructure, and that is where we need to look at the type of incentives that get the infrastructure in place.

Again, we support the B20. We think B20 is a positive and good thing. We would like to come up to work with you on legislation that would really promote the use of fuel and deal with the first-cost issue instead of undermining what impetus is out there.

The Energy Policy Act has been extraordinarily significant in getting manufacturers to develop technology for the marketplace. There are now 47 OEM model natural gas vehicles ranging from heavy-duty to light-duty vehicles. There were none when we passed the Energy Policy Act. People are responding to this legislation. Therefore, that is why we are so concerned about undermining it. We are moving in the direction where we can offer consumers products. We think the right approach again is the right type of financial incentives that should be extended to B20.

Mr. SHIMKUS. I want to follow up on a question. What is more important, developing vehicles or replacing fuel?

Mr. SPERLING. Absolutely replacing fuel. Completely agree with you.

Mr. SHIMKUS. Then I think that is support of this legislation. Significant though the development of vehicles might be, it is not successful in meeting the demands of EPACT, and the statistics prove that it is not going to be. So the question is, how do we move to meet the desired goals if dedicated vehicles were not going to meet the demand? I think this speaks for this legislation.

I would like to turn to a very patient cosponsor, Ms. McCarthy.

Ms. MCCARTHY. I thank you, Mr. Chairman.

Before I begin my inquiry, I would like to just weigh in on this question of cost effectiveness that was being discussed during the hearing and remind everyone that, while the B20 might not be as cost effective as is needed now—although I suspect in Kansas City, Mr. Sellers, it is doing pretty close to that in those four buses that we are using—but some of the other fuels that are allowed under the act received historic, shall we say, breaks. The natural gas industry benefited from the Oil Depletion Allowance Act in history, and there have been other subsidies to other products that are sanctioned under this act as positive alternative fuels. So it hasn't yet asked for that. And anything that we should do with regard to competitiveness issues ought to be in light of some historic subsidies that existed for other fuels over time.

But the inquiry I want to pursue with the panel is one that has been raised by a number of you with regard to not being able to achieve the goal in 2010, call for a management policy act for 30 percent use of alternative vehicles in U.S. vehicles. It is a laudable goal, and one without the act we wouldn't even be moving toward.

Mr. Sperling, you are absolutely right. This act has achieved much good. But we are not going to meet the goals. We are probably going to find the Department coming back to readdress those goals.

Mr. Gross, you pointed out that we are not going to get to the remedy we all seek, and we will probably need to revise it. And also you pointed out very thoughtfully there are no consequences in the act, even though there are laudable goals.

But let us focus for a moment on the consequences that really do exist by not achieving those goals. They are very real consequences, although they are not punitively written out in the act. They involve the health and welfare of this country and the quality of life for this country and we ought to be discussing those today in the context of this bill and how we can all work together to get there.

Because the original purpose of the act was to reduce our dependence on foreign sources of energy, very important, and one which remains today. And I believe one of you pointed out in your testimony the use of energy is increasing. The ability to meet that demand domestically is not without some other developments, such as the one proposed in this legislation.

Of course, beyond that natural security issue was the one of the quality of life and the environment and the health of our people, and several of you pointed out that issue as well. That is a real consequence if we fail to act. Because States, the Nation, as a result of EPA's actions, are trying to meet goals that will mean better air quality for our cities and our Nation; and without this particular effort, we can't get there because the largest use of energy is by these vehicles.

So let us spend a moment—maybe, Mr. Gross, starting with you—and just talk about what can we do to meet the goals that are set out before us by the Department and by the EPA? How is it possible then we can achieve them by incorporating an energy source that, while it wasn't envisioned or possible at the time this law was written, now technologically is out there and could be a valuable component to meeting the goals the act cites and asks us to do? What is it going to take to get there?

Mr. GROSS. Well, I think one part of what it is going to take is further research and development to reduce production costs, increase yields of the feedstocks for biodiesel.

Ms. MCCARTHY. If I might speak, and I don't mean to be rude, I don't believe we held that standard to other forms of energy when we had the old depletion allowance, et cetera.

I would like to say, let us speak in terms of we now know B20 will work. It isn't as cost effective as we would like. Perhaps with more use it could be. I am not asking for a subsidy for it. But I know there is a whole lot of soy waste and other agriculture waste, waste cooking oil and other things that are naturally occurring in this country and available for this product. Please proceed.

Mr. GROSS. This really could be a subject for a long debate. But the point was made that there is not a proposal to provide additional—what I would call serious tools to really make strong movement toward the 10 and 30 percent goals, tools which would include subsidies, which would adjust the relative costs for renewable alternative fuels and replacement fuels relative to the fuel that the objective is to displace, that is, petroleum; or, as has been pointed out previously, not at this hearing yet, and the approach that is taken in some other countries, in Europe, for example, where the use of biodiesel is mandated at certain percentages for diesel vehicles in the equivalent of our nonattainment areas.

I think that the debate ought to center around whether we can actually achieve the goals that we are talking about without taking steps like that to move emerging alternative fuels, replacement fuels and high-fuel-economy vehicles into the marketplace.

So we have got, on the one hand, research and development to improve the technology, bring down the costs of fuels for vehicles; on the other hand, incentives or mandates which may be needed to get over the hump, if we are really going to have a chance at getting to anything like 30 percent in 2010 or even 2020.

Ms. MCCARTHY. I know your preference, as is mine, is that we continue down the path set in motion by the act and get those converted vehicles available to the Kansas City area transit authority and, you know, other places as quickly as possible and with the least cost as possible. But that isn't going to happen as fast as you and I would like it. It isn't happening.

Mr. GROSS. Not as fast as the Energy Policy Act goals would suggest.

Ms. McCarthy. That is right. Right. In the absence of that, and I am asking, what else can we do? You are going to keep going on that path. I think I hear a fear that by bringing along B20 that will thwart that effort.

I don't perceive that as the outcome. I believe it is sort of a hand-and-glove effort and that with your Department working on the right regulations, credit proposals and other things with us, we can both continue to work toward the goals set forward in the act as well as achieve the EPA 2.5 standard and other criteria out there facing communities like mine.

I just want to say, I don't think that—well, I hope a lot of vehicles will be utilizing B20. I still think the laudable goal of conversion will be before us as something that we hope to attain.

Mr. Gross. We support the conversion aspects of the bill. We would like for them to be consistent with the current regulations which basically allow conversions to qualify if they are done within 4 months of the acquisition of a vehicle. There is lots of data that shows that that is quite possible. We don't need to go back to convert vehicles that are already in the fleet that are getting some age on them. It is consistent, actually, with the new vehicle acquisitions to have that kind of a proposal.

But I want to go back to the issue and try to state it once again, because I don't know how to state it differently, that we are with you with regard to promoting the use, the increased use of B20. We believe that the credit provisions of the bill continue and perhaps exacerbate the ability to comply with the Energy Policy Act's provisions for covered fleets by only acquiring vehicles, in this case vehicles that are capable of using B20, if we were to make that change, without ever using the B20.

So it continues, the situation that we now have in bifuel natural gas, where you don't have to use the fuel, flex fuel, ethanol, where you don't have to use the ethanol. If B20 were to remain an alternative fuel with these provisions, if you use it in a heavy vehicle, you could get two credits toward compliance with the Energy Policy Act for not using one gram of the fuel. And that is our concern.

Ms. McCarthy. Mr. Chairman, I appreciate that. I know my time is up, but may I pursue just very briefly——

Mr. Shimkus. Without objection, so ordered.

Ms. McCarthy. Mr. Gross, thank you for articulating that.

Now what I said earlier was I want to work with you to figure out how to get where we both want to be if the bill is not perfect. I would like to look at some ideas you have to make it workable, not to threaten the effort you already have going on but to help the rest of us in communities like mine achieve air quality we seek, the fuel efficiencies we desire, as we move toward the conversion that is, in fact, in the act of 1995.

Could I ask briefly, Mr. Sellers, Mr. Chairman, is it cost effective in Kansas City, this pilot program we have going?

Mr. Sellers. Not at the present time. The limited fuel production, it costs considerably more than diesel fuel.

Ms. McCarthy. What would it take to make it cost effective?

Mr. Sellers. I would say, in my opinion, increased usage would bring the price of fuel down.

Ms. McCarthy. Well, we are faced with meeting the EPA standards. Wouldn't increased use, while bringing the costs down, also help our community meet those standards of air quality?

Mr. Sellers. In my opinion, I would say yes.

Ms. McCarthy. So that is a win-win.

Mr. Sellers. Yes.

Ms. McCarthy. Thank you.

Thank you, Mr. Chairman, for your indulgence.

Mr. Shimkus. You are welcome.

And the panel is going to be pleased that you are going to be saved by the bell. Because after I make some final points, we will then adjourn this hearing. We appreciate all that you have been through.

And I would also like to state—and my colleague from Missouri doesn't, is much more polite and gracious than me. I guess it is our upbringing and our nature—but there has to be a middle ground where we move to address the fuel use.

Mr. Gross, you mentioned, you know, under this proposed bill there could be diesel trucks running around that are burning diesel. Under the rules today, there could be bifuel vehicles out there burning other fuels. And there is no credit, there is no incentive, they are just there. And we need to change that.

Let me go through my points, and I think mostly I would like for people to respond in writing, if it is an issue.

Mr. Gross, if you would, provide me with a list of the number of vehicles in the Department of Energy's fleet and how many of those are in the standard—I think before the Senate testimony, you mentioned the Federal Government is woefully short of even meeting the requirements that—under the Federal Government as a whole. And I am a West Pointer, former ranger, believe in leadership by example. I would like to have a good understanding of where the Department of Energy is in meeting the standards that we passed on them through the EPACT.

[The following was received for the record:]

The Department of Energy's light duty vehicle fleet will consist of approximately 9,800 vehicles at the end of fiscal year 1998. Approximately 6,200 of these vehicles are covered under the provisions of the Energy Policy Act of 1992, Annual acquisition of covered vehicles is approximately 800. Therefore, under EPACT Section 303, the purchase of 400 alternative fuel vehicles is required in FY 1998, and 600 alternative fuel vehicles would be required in FY 1999 and beyond.

In FY 1998, the Department has requested more than 500 alternative fuel vehicles from the General Services Administration which, with credits, represents a 66 percent alternative fuel vehicle acquisition. The quantities for each alternative fuel type and configuration ordered are:

Number	Type
116	Flexible fuel E-85
14	Flexible fuel M-85
295	Bi-fuel compressed natural gas
24	Dedicated compressed natural gas
52	Bi-fuel liquefied petroleum gas
16	Dedicated electric vehicles
517 Total.	

These acquisitions will increase the number of alternative fuel vehicles in the Department's fleet to more than 1,100.

Initial projections for FY 1999 indicate that more than 900 alternative fuel vehicles will be acquired by the Department. Since some of these acquisitions are exempt from EPACT requirements due to geographic location or law enforcement mission, this total represents over 100 percent of EPACT covered acquisitions. Again, the majority of these vehicles will be flexible or bi-fuel vehicles. To ensure use of alternative fuels in these vehicles, the Department is preparing guidance for Departmental fleet managers that alternative fuels must be used unless a waiver from this requirement is obtained from Department Headquarters.

Mr. GROSS. If I might mention, this year we will be exceeding the requirement for 50 percent of new vehicle acquisitions for covered fleets in the Department of Energy. And next year, we project that, because we will be getting alternative-fuel vehicles that are not in the covered fleet we will be over 100 percent of the 75 percent requirement.

Mr. SHIMKUS. Yes. How many of those will be dedicated? How many of those will be dual use? Which will be important to evaluate.

Mr. GROSS. I will tell you that.

Mr. SHIMKUS. And also the total number of vehicles in the total fleet. We will applaud your move in that direction.

Mr. Teall, Mr. Sperling mentions that the goal of EPACT was to develop alternative-fuel infrastructure. I am curious as to the current state of the biodiesel infrastructure and what plants, capacity and a follow-up of what kind of organizations are involved. I mean, what kind of corporations are they? Are they large like ADM or are they smaller in size?

Mr. TEALL. I would say probably AGP is the largest player in the biodiesel industry. And, John, you produced about 6 million gallons a year? That is your capacity?

Mr. CAMPBELL. Yes. The nature of our company is we are a farmer-owned cooperative. We are involved primarily in the soybean business, and we view this as a value-added extension of the soybean farmers' investment.

The biodiesel, we are an infant industry. That is just it, pure and simple. It reminds me of what we went through in the 1970's with ethanol, a lot of interesting characters and new technologies, quote, unquote. We are immature, and we are struggling.

Mr. TEALL. The vision for the future, basically, is you have got three different feed stocks that are used. You have got, first, used vegetable oils, like soybean oil; animal tallows like we made for Kansas City for beef and chicken; and then used cooking oils. A large central processing with diverse resources like that really doesn't make sense.

The vision is probably for many smaller plants throughout the United States serving a local community, providing jobs and reducing transportation costs. Because the resources exist within those regions. However, you know——

Mr. SHIMKUS. Let me cut you off and let me follow-up.

Mr. Sellers, you mentioned that it will be a lot easier to make this transition once the product goes up, am I correct, production of the product?

Mr. SELLERS. Yes. We have a limited source when we go shopping for fuel.

Mr. SHIMKUS. I want to follow—Mr. Campbell, what is the effect if the DOE delays? We do not pass this legislation. DOE delays and doesn't promulgate a rule for another 3 years. What will be the effect of research, development, capital investment in this emerging market?

Mr. CAMPBELL. We can't continue to invest in this if we see—because if we don't see the barriers being broken at the Federal level, if DOE were to suddenly say, yes, we will give you everything that you want, it doesn't mean that we will sell one gallon of fuel. That gives us a driver's license to go out and try to sell some fuel and to get some fleets going. So it is a necessary condition, but it is not sufficient.

But if we were to just go the way we were going, again, eventually, people are going to stop investing in the business.

Mr. SHIMKUS. Thank you. And I appreciate the panel, their consistency, their restraint. And, of course, I am hurrying to get out of here, and I would like to adjourn the subcommittee.

[Whereupon, at 12:13 p.m., the subcommittee was adjourned.]

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